

Sportsman Pilot™



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ALL ARTICLES AND PICTURES

BY JACK COX UNLESS OTHERWISE CREDITED

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In the depths of winter in Wisconsin, fly-ins seem a bit remote, but a look at the calendar tells me they're right around the corner. The Casa Grande, AZ Cactus Fly-In will, in fact, start off the 1992 season just a couple of weeks after you receive this issue of **Sportsman Pilot** . . . the last weekend in February. Then right about tax time in April we'll get to enjoy Sun 'n Fun in Florida again. From that point on, there'll be a sport aviation event somewhere in the country almost every weekend until fall. Enjoy as many of them as you can.

MAG CHECK

1992 promises to be a great year on the fly-in circuit, with a number of new homebuilt designs making their debuts and some really spectacular vintage restorations finally making it out of their respective workshops. Some I can't mention yet, but in **Kaleidoscope** you'll see photos of several antiques that we should see flying this year. John McCulloch's Clipwing Monocoupe should be

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flying away from Jim Kimball's shop in Tangerine, FL about the time you are reading this.

I always hate to see the fly-in season end each year, but I suppose it's good to take a few months off to avoid sensory overload. It also gives you builders and restorers time to finish next season's sensations.

That's what I keep telling myself . . . but I have a confession to make: I was ready to go look at airplanes again two weeks after returning from our last fly-in in '91.

Phooey on winter!



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Looking for a special way to remember an aviation friend on a birthday, anniversary or other special occasion . . . or, maybe, a unique way to say thanks for help on your homebuilding or antique restoration project? Give that person a subscription to **Sportsman Pilot** so he or she will remember you all year long. To personalize your gift subscription, send us your check, the name and complete mailing address of the recipient and we will send out a nice card containing whatever message you want to convey. There's no extra charge for this service - and we will start your friend's subscription with whatever issue you request.

BOOK REVIEW - JEAN BATTEN, THE GARBO OF THE SKIES

Jean Batten, The Garbo of the Skies by Ian Mackersey was published in Great Britain in 1991 by Macdonald & Company (Publishers) Ltd., Orbit House, 1 New Fetter Lane, London EC4A 1AR.

A lot about Jean Batten has appeared here in **Sportsman Pilot** in the past few years . . . several items on the mystery surrounding her death in 1982, and an extensive review of her book, **Alone in the Sky**, which appeared in our Summer 1989 issue (Volume 9, Number 2 - page 5). At the end of that review, it was noted that New Zealand writer and documentary film maker Ian Mackersey and his wife, Caroline, were making a video on Jean Batten . . . and in the Fall 1989 issue we expressed surprise that it was shown on the Discovery Channel very shortly after our Summer issue was mailed. The title of the documentary film was **Jean Batten, The Garbo of the Skies**. Now, Ian Mackersey has written a book with the same title. My friend Ron Moulton of Herts, England has made me a gift of the book . . . for which I am eternally grateful . . . and I want to share a review of it with all of you.

First, I have to say that Jean Batten is probably spinning in her pauper's grave over this book. Throughout her life she steadfastly refused to submit to the interviews that would have been necessary for another to write a book about her, choosing instead to write her own. While quite interesting, her **Alone in the Sky**, which is a 1979 reprint and retitling of her 1938 book, **My Life**, is obviously one dimensional. The problem is that the real Jean Batten never comes across . . . there's only the celebrity smiling and waving to the crowd in newspaper photos after another record flight . . . the fiercely determined pilot battling the elements to cross another continent, another ocean . . . the almost antiseptic young woman whose only close relationship is with her mother.

Sadly enough, according to author Mackersey, that **was** the real Jean Batten. Her entire adult life, he tells us, was devoted to creating a kind of story book public image of the beautiful heroine of the skies, then trag-



John McCulloch's Clipwing Monocoupe nearing completion in Jim Kimball's shop in Tangerine, FL. The first flight was expected to take place early this month. The little brute is red with white trim and scallops. A 185 Warner was bolted on the nose soon after this photo was taken. A Monocoupe's one-piece wing sits on top of the fuselage and actually becomes the top of the cabin. 101H was completed in May of 1938 for Monocoupe president Clare Bunch and licensed as NC511. It was later sold to Cuban Jose Acebo, and when he sold it to Pan American captain Rusty Heard of Miami, it was re-registered as N101H. Rusty died in the airplane when he did not make it through the bottom of a pull-out from a hammerhead initiated at low altitude. The late Dick Austin bought the paperwork and began a restoration, and his estate sold it to Red Nichols of Black Mountain, NC. After Red died, John bought the project from his estate. It will be great seeing the little Clipwing in the air again. The photo was sent to us by John McCulloch. Look at all the other airplane stuff on Jim Kimball's workshop wall.

ically wasting nearly five subsequent decades attempting to sustain that image by living a Garbo-like existence . . . shunning contact with the rest of the world and trying to be that 27 year old celebrity forever. Everything was a facade . . . the myth of her wonderful childhood in New Zealand, when, in reality, her father was an incorrigible womanizer who lived apart from her mother during much of Jean's childhood . . . the outright fabrication, repeated over and over to the press, that her early record flights were financed by her mother, when, in truth, her mother was penniless . . . the impression that she and her mother had a close but normal relationship, when, in fact, according to the author, her mother dominated her to a degree that even psychiatrists used as consultants for the book found unusual.

Indeed, the central theme of Mackersey's book is the Svengali role Jean's mother,

Ellen, played in her life. The text sometimes reads like the script of a Hollywood B movie about the relationship between a "stage mother" and her daughter . . . in which the mother, who was denied an acting (or singing, or dancing) career in her youth, tries to attain it vicariously through her daughter. Ellen Batten wanted to be someone important, someone special, but never had the opportunity, so she created Jean in the image she was denied, Mackersey believes. This hypothesis is plausible to a point. It grows weak, however, when one begins to consider how it would be possible for a person with the iron will to hold a compass course completely through the horrible thunderstorms of the Intertropical Convergence Zone to allow someone to make decisions for her . . . against her will. Jean's mother, after all, did not drag her kicking and screaming to her airplane, stuff her into the cockpit and order

her to fly across the South Atlantic to Brazil . . . or to Australia. Jean Batten was one of the most methodical flight planners and superb navigators in aviation history . . . things her mother knew nothing about. As a pilot, Jean fully understood the risks she faced; her mother did not. We have to conclude, I believe, that the life Jean lived both during and for the decades after her brief hour upon the world stage in the 1930s was as much her own choosing as it was her mother's desire. The "relationship" between Jean and her mother was more likely based on the fact that the same bats flew in each of their belfries. This is probably best borne out in the fact that after her mother's death, Jean continued to play the Garbo role. She did make a comeback of sorts in the 1970s and was lauded again as a celebrity, but of her own choosing she kept reverting periodically to a life of seclusion. During her comeback, while in her 60s and early 70s, Jean

died her hair, had several facelifts, wore miniskirts and talked incessantly to anyone who would listen about her aviation exploits in the 1930s. Those who met her during this period invariably came away with the impression of a lonely, empty person whose purpose in life had ended the last time she stepped from the wing of her Percival Gull Six.

In **Alone in the Sky** Jean acknowledges the men in her early life only in passing, but in his research and interviews with hundreds of people who knew her, Ian Mackersey details a string of relationships that were mostly based on a desperate need for money. Jean left New Zealand for England as a 22 year old with her life's goals firmly in mind: she would learn to fly, obtain an airplane and become the first woman to fly from Great Britain to her homeland. (As it turned out, she became the first woman or man to make the flight.) The problem was that she had no money, and flying was as expensive then as

it is today. She was resourceful, however, and sufficiently ruthless to solve her monetary shortfall. A stunning beauty, she attracted men at every hand . . . so she simply selected those with money and the least resistance to her charms, drained their wallets dry . . . then moved on to the next donor. The first two Gipsy Moths she used in her efforts to fly from Great Britain to Australia were largely obtained in this manner . . . plus some financial assistance from a British oil baron . . . but after she finally made the flight "down under" and return, her fame was such that she was able to command speaker's and appearance fees sufficient to buy her most famous airplane, the Gull Six, herself. From that point on, she had little to do with men . . . save one. Apparently, she did fall in love with a young Australian named Beverley Shepherd and may have intended to marry him. Unfortunately, he was killed in the crash of a Stinson airliner in which he

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BACK ISSUES

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Reno '91, Jon Sharp's Nemesis, Dan Murray's Travel Air.

was flying as co-pilot . . . while on the way to meet Jean . . . and that would be the last serious involvement with men in her life. (She claimed to have fallen in love again during World War II, to a bomber pilot, only to have him die in combat . . . but author Mackersey was not able to verify this.)

Not so very long after her flight to New Zealand and return to England, World War II started and, ever the patriot, Jean tried to volunteer for duty as a ferry pilot. Surprisingly, she did not pass the physical . . . imperfect vision, she would claim. Mackersey thinks otherwise, theorizing that she did not want to lose her star status by " . . . becoming just an anonymous member of a team . . ." When the war broke out, she had volunteered herself and her Gull Six, assuming, Mackersey, says that " . . . the Air Ministry would have been honored to accept her and her plane as a glamorous package." Perhaps she thought she would be used to shuttle VIPs around or even make appearances at bases to boost morale (which she eventually did). The government refused her proposal, but confiscated her Gull Six and used it throughout the war. Thwarted in her plan, she stepped back from aviation and never flew an airplane again. She worked in a war plant for a time, but was later recruited to go on tour giving pep talks to both servicemen and civilian workers.

After the war, Jean and her mother moved to Jamaica and lived there for six years. Then one day in 1953, the two of them pulled up stakes and began a 13 year "cultural pilgrimage" all over Europe and various islands of the Atlantic that did not end until 1966 when Ellen died in Jean's arms in a rented apartment in a small fishing village in the Canary Islands. She was 89. The loss of her mother was traumatic for Jean, and it took her 3 years to shake off the worst of her grief. Finally, however, she came out of seclusion . . . she had remained in the Canaries after her mother's death . . . and began a decade long pattern of alternating between bouncing around the world trying desperately to still be the 27 year old heroine of the sky and returning to the Canaries for periods of seclusion. In the course of her travels, she visited the U. S. briefly and was honored by the 99s.

Finally in October of 1982, Jean pulled up stakes again and moved to the island of Majorca off the east coast of Spain. A few weeks later she wrote her publisher in England . . . and was never heard from again. Because of her pattern of alternating appearances and periods of seclusion, none of her acquaintances thought much of her lack of communication for a time. Eventually, however, some began to worry and make inquiries. She was 73 at the time so there were fears for her physical condition . . . or even that she had died. In every case, the inquiries ran into a stone wall. Jean Batten had simply disappeared. Ultimately several years passed, and, finally, it was realized that something was desperately wrong. This only served to heighten the mystery and as a result, a number of people began making concerted efforts to discover what had happened to Jean. A British newspaper sent a reporter to Majorca to search for an answer, but came up empty handed. Mackersey, himself, and his wife, Caroline, joined the hunt, but were no more successful than the others. Finally, in 1987 Caroline sent a letter from New Zealand to Majorcan authorities



Dr. Ed Garber of Fayetteville, NC made the first flight in his 1932 Menasco powered Fairchild 22 C7B on November 11, 1991 . . . after 8 years of restoration work. He says it flies beautifully, climbs 1,000 fpm and indicates 100 mph at 1,850 rpm. Interestingly, Ed says acro ace Jim Franklin jumped from the airplane when he was 20 years old . . . after pulling a wing off it in an aerobatic maneuver. Ed didn't have much to start with when he began the project, so it has been a monumental job to get the Fairchild going again.



. . . and promptly received a copy of Jean's death certificate! Some sort of bureaucratic mix-up had kept the document from earlier investigators, but there it was . . . Jean Batten had died in the city of Palma on the island of Majorca on November 22, 1982. Later, Mackersey would visit Majorca and learn first hand how Jean had died. From a maid who was working in the hotel where Jean had taken a room in 1982, he discovered that she had gone for a walk, was bitten by a dog . . . and refused to allow a doctor to see her. The wound became infected, the infection spread to her lungs and she died . . . needlessly.

None of the authorities in Majorca had ever heard of Jean Batten so they said there was no reason to go to any special effort to locate her next of kin. Her body lay unclaimed in a morgue for two months before she was finally laid to rest in a pauper's mass grave . . . a pit in which layer upon layer of coffins were placed until finally full. By the time Mackersey discovered her fate, it was estimated she lay beneath perhaps 50 other coffins, so no effort was made to recover her remains and comply with the provisions of a note included with her will. She had wanted her ashes placed in an alabaster urn, flown to New Zealand in a Concorde supersonic airliner and " . . . placed on or near the Auckland International airport where I landed on 16 October 1936 . . ."

If it is still possible to get copies of both **Alone in the Sky** and **Jean Batten, The Garbo of the Skies**, you should read each of them to get a balanced picture of this great woman flyer's life. Her own accounts of her flights are by far the most interesting and revealing, but you do need Mackersey's book to glimpse the flesh and blood side of this brilliant but tragically flawed personality. Both are highly recommended.

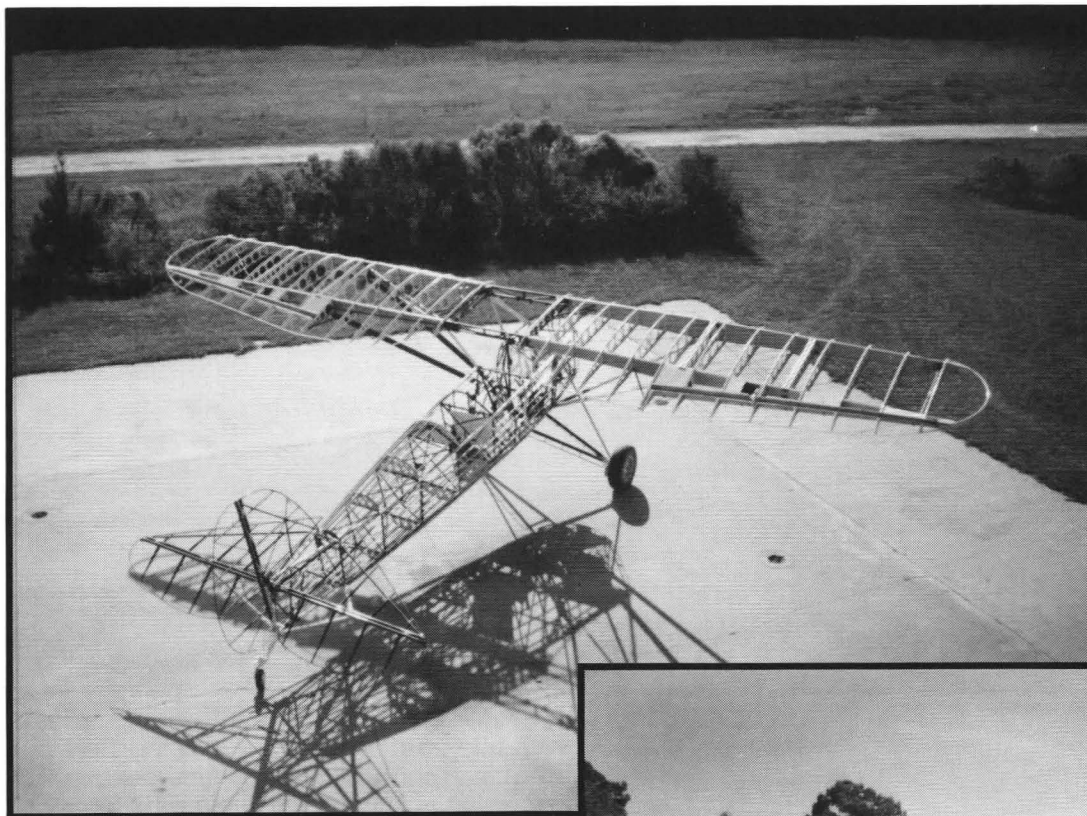
OBITUARIES

Dorothy Weick, wife of Ercoupe designer Fred Weick, died on November 17, 1991 at Vero Beach, FL. She was 91. Fred and Dorothy were married in 1925 and shared over six decades of family life, Fred's career as one of the world's foremost aeronautical engineers and their own personal flying. Always fully supportive of Fred's activities, she helped cover the W-1 in the early '30s, edited all his many technical papers over the years (she was an English teacher before their marriage) and helped navigate when they went on flying trips. She learned to fly in an Ercoupe in 1947 and was a member of the 99s. Somehow Dorothy also found the time to raise a family and participate in many civic and church activities.

In recent years Fred and Dorothy regularly attended Ercoupe fly-ins around the country and she was loved by all those who had the pleasure of getting to know her. She is survived by her husband Fred, a daughter and two sons.

Our condolences to Fred and his family.

John L. Howard, 70, of Wellington, KS died on August 4, 1990 after a long illness. John was an Air Force mechanic who lived and made friends all over the world during his 23 year military career. At every place he was based he quickly became established in the local and area antique airplane community, getting involved in restoration activity, writing for newsletters, speaking at forums and banquets, etc. John was a colorful character and always had great stories to tell. In the late 1960s, he was transferred from Langley AFB in Virginia to Guam and while there, restored a Bellanca Cruisair to use in an island hopping air taxi service he named "Fat Chance Air Lines" . . . for one's prospects in case of a forced landing in the shark infested waters of that part of the Pacific. In a serious moment at one of our Carolinas/Virginia Chapter meetings in the



mid-60s, he urged everyone to make a concerted effort to save the vintage airplanes, "... because there aren't going to be any antique airplanes in the future from our present era." He went on to explain that the new all-metal airplanes he was inspecting in the coastal area around Norfolk, VA were picking up corrosion so quickly that he feared none of them would be airworthy by the time they were old enough to be vintage showplanes.

After he retired from the Air Force, John and his wife, Marguerite, settled in Wellington, KS and operated Howard's DGA Service as long as his health permitted.

Our condolences to Marguerite and her family.

Steve Pfister, 34, of Santa Paula, CA finally lost his battle with cancer on October 2, 1991. An "airport kid" at the famed Santa Paula airport, Steve grew up to be a tremendous craftsman, a skilled pilot and the restorer of a number of trophy winning vintage aircraft. He soloed on his 16th birthday in one of actor Cliff Robertson's Tiger Moths, earned his A&P license at the Northrop Institute ... and came right back to Santa Paula to restore vintage aircraft. After the tragic fire that destroyed the San Diego Aerospace Museum, he helped Jim Dewey build the replica of the Spirit of St. Louis that is featured there today ... and later helped complete Tom Homan's Hisso Travel Air. His first complete restoration was Bill Spriggs' Staggerwing, the story of which was featured here in **Sportsman Pilot** in our Summer 1983 issue. Steve achieved widest acclaim, however, when he recovered the buried remains of the Serial Number 1 Staggerwing and began its restoration in his spare time and on his own limited finances. **Sportsman Pilot** visited the project and reported on it several times during the late 1980s. Sadly, Steve would not live to see its completion, but before his untimely death he did have the satisfaction of knowing his efforts had not been in vain. The project was purchased by the Staggerwing Foundation in Tullahoma, TN and presently is being completed by Jim Younkin in Fayetteville, AR. Once on display in the Staggerwing

that the Granville brothers made to the racer in 1933 and 1934, but Steve and Delmar wouldn't buy it. They wanted to find out what the original version was like.

Delmar, who is the owner of the airplane, has done all of the flying to date. He made the initial two flights on Monday, December 23, and has flown it a number of times since. The Gee Bee was built in Steve Wolf's hangar on the Creswell, OR airport and Delmar has done all his test flying off the airport's 3,100' x 60' runway.

A large crowd was on hand to witness the first flight ... and they got a lot more than they had bargained for. After satisfying himself that the wings were going to stay on and the engine was going to continue to run, Delmar progressed on through his test flight card to the fun stuff: loops, rolls, 4-point rolls, inverted flight and knife edge flight!

Delmar says the R-2's rudder and



Roy Wicker was just about to begin covering the Davis he and **Barbara Kitchens** own in partnership when he took these pictures in October. He says they decided to go with **Stits fabric** and finishes instead of the Irish linen he had already imported from England. If any of you have a need for Irish linen, give **Roy** a call at his home in Quitman, GA. The number is 912/263-7210.



Museum, the airplane will be a lasting tribute to a dedicated and tremendously talented young man who was taken from us far too soon.

Our condolences to Steve's wife, Stacy, and family.

GEE BEE R-2 FLIES

The awesome Gee Bee R-2 replica on static display at Oshkosh last summer has flown. Built by Delmar Benjamin and Steve Wolf, the 450 hp P&W R-985 powered racer was built as much like the original 1932 design as possible, the major deviation being a set of modern Cleveland wheels and brakes. Both Delmar and Steve are highly experienced aerobatic pilots and have flown some pretty demanding airplanes in their time, so they believed that if it were possible to manage the beast, they should be pretty good candidates for the job. When they began building the airframe, friends urged them to incorporate the modifications ... stretched fuselage, enlarged rudder, etc. ...

elevator are overly sensitive with the CG at about 24% ... the rudder especially so. On the first couple of flights he was sitting atop cushions and a parachute in order to get his head as high up in the canopy as possible, so every time he pushed on a rudder pedal, the cushions allowed him to squirm in the seat just enough to exaggerate the rudder input ... which would slam the ball right to its left or right limits. It was bad enough that he installed side restraints on the seat to keep his hips from moving sideways. Curtis Pitts and others have advised Steve and Delmar to move the CG further forward, which they say will lessen the rudder/elevator sensitivity. Just in burning off the fuel during a flight and getting a minute CG change, Delmar has been able to confirm that this is the case, so the plan is to move the battery and some other items further forward in order to shift the CG to about 18% of chord.

Delmar says the ailerons are terrific, producing a very high roll rate. This alone makes the airplane fun to fly, he says. The not-so-much-fun part includes a stall speed

of 100 mph and an inclination to snap at the break. He has opened the top end envelope to 240 mph with no indication of flutter . . . and on the other end has worked his way down from an approach speed of 150 or so to about 120. He makes a tail low wheel landing and needs to be able to get on the brakes for steering when the rudder goes away at about 80 mph. Runway handling is manageable, he says, but is about as twitchy as anything he has ever flown.

Before committing themselves to building the Gee Bee, Steve and Delmar did extensive research on the design. One of the things they realized early on was that the pilots who were killed in the R-1 and R-2 did not have much . . . or any . . . time in anything with a wing loading even approaching what it was in those racers. A number of the accidents were the inevitable result of trying to fly from impossibly short runways. The racers of the '30s were flown with CGs well aft in order to go faster, but this created some

dangerous handling characteristics. Delmar's plan is to fly an aerobatic routine in the Gee Bee on the air show circuit, so the CG will be moved to 18% or so of chord to get better handling. **That** will be something to see!

"F/X" EXPLAINED

In the Reno air race coverage in our last issue, I wondered what the name "F/X" Dan Gray had assigned to his Formula 1 meant. John Baker of Macon, GA tells me it is a Hollywood term for "special effects." That shows how little I know . . . but, then, I haven't been to a movie that didn't have airplanes in it since . . . well, since John Wayne went west, I guess.

1991 COPPERSTATE FLY-IN

The 1991 edition of the EAA Copperstate Fly-In was blessed with absolutely stunning

weather, and, consequently, a big crowd of people and a great turnout of showplanes were on hand. This was the second year at Prescott, AZ and many of the facilities were improved significantly since the pioneering event in 1990. Particularly impressive was the area for the forums, workshops and commercial booths. As noted in our Fall 1991 issue, Myron Jenkins' new Glasair III was the all-class grand champion of the event, and, as promised, you can read all about it elsewhere in this issue. You can also read about one of the more interesting technical highlights of the fly-in in this issue . . . Justin Mace's Subaru Legacy powered Dragonfly. Jack Compere's Ercoupe is also one of the stars of this issue and got me going on Fred Weick and the whole story of the Ercoupe.

An interesting aspect of the 1991 Copperstate Fly-In was the number of very nice older homebuilts . . . Starduster, Skybolt, PJ-260 . . . even a Rose Parakeet. A sampling of them are pictured here. 🐦

HB-YDJ, a Swiss registered homebuilt, at Prescott, AZ? Indeed, and it was flown to the U. S. across the big pond. Owned by Jurg and Beate Sommerauer, formerly of Zurich, the "Pink Baron" was flown to Ogden, UT last summer by Jurg and a friend, Sven Girsperger. Jurg works for an oil company and was taking a new job in the U. S. Navigation across the North Atlantic was by means of a Trimble Transpack GPS, which worked flawlessly.



This bright green and white Starduster Too is powered by a 260 hp Lycoming IO-540. Empty weight is 1,170 pounds, gross is 1,800. Cruises at 155 mph and lands at 80. It is owned by Ron Gregory and Sharon Mason of Big Bear City, CA.





How about these treasures on sale at the Copperstate Fly-In! They are tiny Lawrence radials (note the camera for perspective) that were used in World War II as GPUs.

A really sharp Continental A-65 powered Pietenpol Air Camper by Harry Olsson of Camp Verde, AZ. It weighs 633 pounds, grosses at 1,025 and cruises at 80 to 85. Lands at 40.



This beautiful Skybolt belongs to Tom Harper of Fallbrook, CA. Powered by a 260 hp Lycoming, it cruises at 130 knots. Empty weight is 1,288 pounds. Biplane racer Tom Aberle, also of Fallbrook, was flying the airplane when they departed for home.

N300PJ is a PJ-260 owned by Howard Jones of Farmington, NM. It is powered by a 300 hp Continental IO-520D. Empty weight is 1,600 pounds and gross is 2,200. Cruises at 150 mph and lands at 60.

The long distance trophy awarded at the Copperstate EAA Fly-In went to Jerry and Helen Lynch of Apple Valley, MN who flew to Prescott in their Cozy. Powered by a 150 hp Lycoming O-320, their N32HL cruises at 180 mph and lands at 80. Empty weight is 1,050 pounds, gross is 1,600.





BILL DECREEFT'S . . .

Travel Air 6000

If you have visited the famed Santa Paula, CA airport lately you know that rides are available there during the winter months in a big ol' Travel Air 6000B. The airplane is fully certified by the FAA for commercial work, and its pilot/owner/restorer, Bill de-Creeft of Homer, Alaska, has the FAA's blessing to fly passengers for hire in the 63 year old antique. If you choose to go for a ride, you are truly soaring on the wings of history.

The Travel Air 6000 was a big 6-place monoplane certified in January of 1929 (ATC #100). Designed by Travel Air's chief engineer, Horace Weihmiller, it was a direct descendant of earlier Model 5000 monoplanes developed for National Air Transport . . . and a special variant, the **Woolaroc**, which was the winner of the Dole Derby from Oakland, CA to Hawaii in August of 1927. Flown by Art Goebel and navigated across the 2,400 miles of ocean by Lt. William V. Davis, the **Woolaroc** was actually the second Travel Air 5000 to fly from the mainland U. S. to Hawaii that year. On July 14-15, Ernest Smith and Emory Bronte, flying the prototype Model 5000, became the first civilians to make the crossing . . . and the second ever,

after the Army's Lester Maitland and Albert Hegenberger completed the first mainland to Hawaii flight on June 28-29, 1927 in a Fokker C-2 trimotor.

The Travel Air 6000 was developed specifically for executive flying . . . and to the extent the state of the art of 1929 would permit, it was set up just like a Learjet or Citation of today: with a plush interior, a toilet/washroom, the latest instrumentation and the best engines available. Travel Air's PR department called it . . . of course . . . the "Limousine of the Air." Three models would be licensed and produced: the Model 6000 (ATC #100) powered by the 220 hp Wright J5 Whirlwind, the Model A-6000-A (ATC #116) powered by the 300 hp Pratt & Whitney R-985 . . . and the most popular of all, the Model 6000B (ATC #130) powered by the 300 hp Wright J6 (R-975). (Actually, there was one more variant of the 6000. After Travel Air was sold to the Curtiss Wright Corporation, the Model 6D was developed as a follow-on to the 6000B. Certified in August of 1930 [ATC #352], it had a slightly enlarged cockpit area, but otherwise differed only in small details of trim and finish.)

The 6000B had a wing span of 48' 7", a length of 30' 10" and a typical empty weight of 2,608 pounds. Gross was 4,230 pounds. The structure was typical of all the Travel Airs, biplanes and monoplanes alike: steel tube fuselage and tail surfaces and a wooden wing . . . all fabric covered. The advertised top speed was 130 mph and cruise was said to be 110. With a standard fuel capacity of 82 gallons, no-wind range was 550 miles. The price at the factory ranged from \$13,000 to \$13,500 . . . which was a ton of money in 1929, even before the stock market crash. The most expensive Travel Air ever sold was a Pratt & Whitney powered A-6000-A custom built for Wallace Beery. It set the famed actor back a cool \$20,000, which would be around \$200,000 in today's inflated currency.

Although originally intended for executive flying, the 6000s actually saw more use as "feeder liners" . . . or commuters, as we call them today. Delta Air Lines was one of the operators of 6000s, and now has one, NC452N (actually a Curtiss Wright Travel Air 6D) restored for use in promotional displays at places like the EAA Convention at Osh-



kosh.

Because of their ruggedness and load carrying ability, the 6000 soon found its way to the backwoods of the world. Certified for use on Edo floats, it didn't take long for bush pilots in Canada and Alaska to latch on to them.

The 6000s also came in for their share of the wackiness that persisted for a decade after Lindbergh's flight to Paris. After all the oceans and continents of the world had quickly been spanned, pilots switched to endurance flying as a means of grabbing a little piece of immortality. The 1929 6000B you see pictured here, NC9084, Serial Number 865, was originally owned by the Phillips Petroleum Company of Bartlesville, OK, but was in Wichita in August of 1930 with "City of Wichita" emblazoned on its sides and being readied to break the men's landplane refueled endurance record of 647 hours 28 minutes and 30 seconds set by Red Jackson and Forest O'Brine in a Curtiss Robin. Flown by Charles Lander and Roger Rudd, the attempt ended after a fuel leak developed 11 hours and 20 minutes into the flight. They tried again a few days later, but a stuck hose valve put them on the ground after 13 hours and 55 minutes aloft. They were being re-

fueled in the air by another Travel Air 6000, the "Romancer", flown by Clarence Clark and Newman Wadlow. Less than a month later, 9084 showed up in Oklahoma City with "Century of Oklahoma City" painted on the fuselage . . . ready for another shot at the record. This time the pilots were Bennett Griffin and Roy Hunt, and they made it all the way to 292 hours and 24 minutes before being forced down by one of the infamous dust storms that were rapidly turning the area into the "dust bowl" of historic note and sending unfortunate "Oakies" fleeing to California for what they hoped would be a better life.

After the unsuccessful attempts to break the refueled endurance record, ol' NC9084 went through a series of owners before ultimately ending up in the hands of Johnson Flying Service in Missoula, Montana. This famed outfit utilized a virtual air force of old airplanes well into the 1960s to service Forest Service contracts . . . using Ford Tri Motors, Travel Air 6000s and other types to spray trees, haul smoke jumpers and to accomplish a variety of other tasks that required the use of large aircraft able to operate out of short, relatively unimproved air strips. Finally in the late 1960s the company began to sell off the golden oldies . . . and one of the buyers was Bill deCreeft.

Bill is a native of California and learned to fly at Santa Barbara in 1951 in an Aeronca Champ . . . N2110E, as a matter of fact, which is owned today by John Morello and Gene Strable of Mason, Ohio. Service in Korea with the Army interrupted Bill's flying career, but upon his return to California, he resumed flying at Cable Airport near Ontario, earning his Private license in 1954 and his Commercial in 1956. In 1962 he went to Alaska and did some bush flying, but came back to California. He returned in 1966 and started his own operation in Homer, Alaska, incorporated it in 1967 and has been there ever since.

Bill operated a variety of airplanes in his bush flying operation . . . a Grumman Goose and Widgeon, Cessna 185s . . . but needed something big and rugged to haul freight. In 1969 he heard that Johnson Flying Service was selling off its Travel Air 6000s, so he bought a basket case, NC9038, and one that was licensed and flying, NC9084, and had a friend fly it up from Montana. He operated the ol' bird on both wheels and floats until 1976, when a newly acquired deHavilland Otter took its place.

"It hauled a lot of plywood and moose meat, but, finally, it just outlived its usefulness," Bill says today. "I let it sit for about 10



Yes, folks, this is the john in the deCreeft Travel Air 6000.

years, then I got the idea of restoring the 6000 and bringing it down to Southern California to barnstorm during the winter months. The airplane had been fully restored in 1970 while it was still being worked, and the wings were redone in 1984. Beginning in 1987 the fuselage was completely gone through, but this time it was restored to a typical fresh from the factory 1929 configuration instead of a working bush plane. A new firewall, cowling and instrument panel had to be made . . . and the Norseman wheels it had been equipped with were replaced by the original 32 x 6 Bendix wheels and brakes. Original tires are no longer available, but Bill was able to get a field approval for use of antique truck tires that are the correct size.

The original wicker seats came with the airplane when it was purchased from Johnson Flying Service, and they were refurbished and reinstalled. The "wicker" is not the real thing, but is the wire-wrapped-in-paper substitute that was popular for use in furniture during the 1920s and '30s . . . and was used in the 6000s. The legs are securely attached to the fuselage structure with aircraft cable. One good round control wheel was found and installed, but the other had to be made up by splicing new wood around the spokes. Since several trips to the "lower 48" were anticipated, there was no attempt





to locate and install vintage instruments.

"Flying down from Alaska in winter is serious business, and we wanted to have everything going for us. We may put in some of the old gauges later, however."

Then there was the bathroom. NC9084 didn't have one when it emerged from the Travel Air factory in 1929, but the option was available. Bill wanted the airplane to be representative of a custom model, so he built and installed one. He had no drawings, but photos of the original "heads" were available, so he copied them to last detail. The walls were covered with fake ceramic tile and the floor with linoleum embossed with a brick pattern, and Bill expended a tremendous amount of time and effort in locating the exact material. The wall tile was easy enough, but he was never able to come up with the exact "brick" pattern. He found one that was very close and ultimately ended up using it, but he is still on the lookout for the correct "brick."

When the airframe work was completed, all of it was covered up with Stits fabric and finishes instead of Grade A because Bill wanted the fire retardant qualities of the modern material. It's also difficult and expensive to get a shop warm enough to work with Grade A and dope during an Alaskan winter, he says.

The engine in 9084 is a 450 hp Wright R-975 out of a BT-15 . . . which is a lineal descendent of the J6-9 that powered the airplane originally. The prop is a 9.5 foot long Hamilton Standard with 1567X blades.

We met Bill for the first time at the Cactus Fly-In in Casa Grande, AZ last March. Commenting on the restoration and his plans to barnstorm it, he said: "Mostly, I just wanted to see if I could do it. The airplane used to be an air taxi, and I just wanted to put it back in that business. It's still a working airplane . . . never has quit being one."

It has also been used as a grand tourer. In 1971, right after Bill restored it for the first time, he and his wife, Barbara, flew it from Alaska to New York . . . with no heater to combat a temperature of 44 below zero encountered along the way at Watson Lake. From New York they headed south to San-

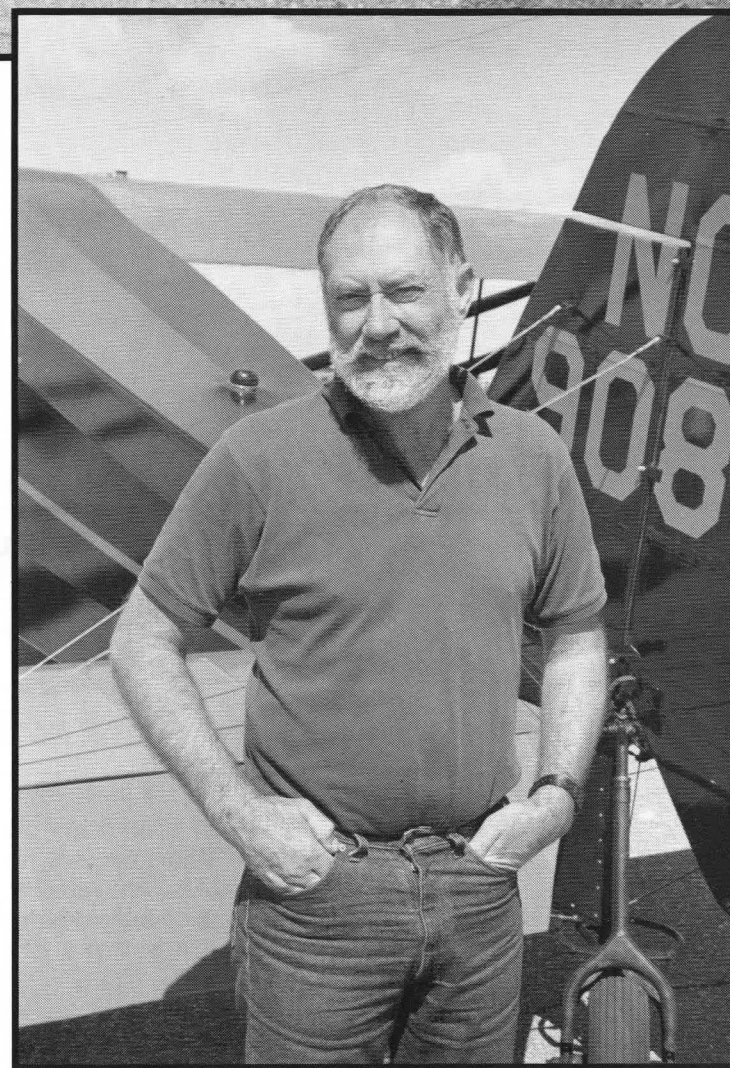
tee, SC to visit Wings and Wheels Museum where another ex-Johnson Flying Service Travel Air 6000 was located. Wings and Wheels owner Dolph Overton had purchased two of them, NC8112 and NC8865, about the time Bill had bought his 6000s and he wanted to see the one that remained. At that time NC8112 was on display in the museum, but 8865 had been sold. Today, 8112 is registered to the Central Flying Service of Little Rock, Arkansas, and 8865 is owned by Morton Lester of Martinsville, VA and is on display at the Staggerwing Museum in Tullahoma, TN. 8865 had been taken by Ernie Webb of Charlotte, NC as partial payment for restoring a Command-Aire for Dolph Overton, and Morton acquired it from Ernie. I relate all this as an aside, because in 1969 Golda and I worked for Dolph Overton at Wings and Wheels and I was quite familiar with his 6000s. Dolph also purchased a Ford 4AT Tri Motor from Johnson Flying Service in 1969 . . . to go with a 5AT he had previously bought from Island Airways in Port Clinton, Ohio . . . so we were up to our ears in interesting old airplanes at that time. We had left South Carolina and had gone to work for EAA in Wisconsin by the time Bill and Barbara deCleeft came through with their Travel Air, however.

From Wings and Wheels, the deCleefts flew on to Vicksburg, Mississippi, across the southern tier of states to California and finally back to Alaska.

"We hit everything from 44 below to 105 above on that 160 hour trip . . . with no heater and no air conditioner. The heater was the one we really needed!"

Bill says one of the most enjoyable aspects of owning an antique airplane is meeting old timers who had some sort of association with it in years past. One of the owners of the airplane, between the time of its endurance record attempts and its sale to Johnson Flying Service, was Keenan Brothers Flying Service in Texas . . . who flew it out to California in 1936.

"I met a guy who used to fly for them in Bakersfield. He told me they had a siren hooked to a strut and he would tie a rope to



Bill deCreeft

it so it wouldn't turn; then when he got over town, he would jerk it loose and let the thing begin to wail. That would cause all the cars below to pull off the road, then rush out to the airport for rides. He's still got the siren and is going to give it to me . . . and I'm going to put it back on the airplane. I also met one of the fellows who flew it in the endurance attempts and took him for a ride. It's really a lot of fun to meet all of them."

If you would like to become a part of the airplane's history, there's still time. Bill is spending this winter in Santa Paula and is selling rides in 9084. Don't put it off . . . he'll be heading back to Homer with the wild geese this spring. ☺



MYRON JENKINS' . . . **GLASAIR III**

In our Winter (February) 1986 issue we introduced **Sportsman Pilot** readers to Myron and Marie Jenkins of Parker, Arizona. Myron had just completed a beautiful 160 hp Glasair RG that was unique in that it had been built out in the open on the family's cabana overlooking the Colorado River. Although he had soloed a 152 and 172, Myron, like so many builders, stopped flying during the construction of his RG and did not get back in the air until the Glasair was completed a couple of years later. Essentially all his subsequent flying time has been in that airplane . . . which has a significant bearing on the story of his latest masterpiece, a beautiful Glasair III.

Myron's first homebuilt, his Glasair RG, was very nicely done and went on to win a lot of trophies in the late 1980s. In retrospect, however, it was merely his basic training for building his new Glasair III . . . which won the all-category Grand Champion award at the 1991 Copperstate EAA Fly-In at Prescott, AZ the first weekend in October. This was the airplane's public debut, and it was an impressive one, indeed.

I interviewed Myron at Prescott even be-

fore his award was announced, because he was the first person I knew of who had completed one of the early Stoddard-Hamilton kits, then followed it up with one of the latest. A lot of improvements have been made in the firm's kits over the past decade and I was interested to hear his comparisons between the two. Myron's RG, in fact, was originally purchased as a fixed gear taildragger (later called a Model TD), and was switched to a retractable tri-gear Model RG during construction when that option came on the market. And, of course, I was interested to hear how he had fared jumping from a 160 hp, fixed prop RG to a 300 hp Glasair III with a constant speed prop. We began with the differences in the kits.

"This kit was much easier to put together, but more time consuming because it's a bigger plane. It's a little more complicated in its systems and such, and the finishing and painting took more time than just finishing the tape on my RG, which had gel coated parts. Also, on my first plane, I had to have a lot of the metal parts welded and plated or painted, where on this one all the parts were ready to install. That saved a lot of hand

work, time and detail. It was still time consuming though, just more to do than on the earlier, simpler plane."

For those of you not familiar with the evolution of the Glasair kits, which were the first to be offered to the public in almost totally pre-molded form, the early versions came with all the exterior surfaces in smooth white gel coat. The idea was to eliminate most of the laborious sanding and painting, leaving the builder with just the task of making the taped seams (where the parts had been mated) blend in with the rest of the airframe. That, however, turned out to be a problem. Try as they might, neither Stoddard-Hamilton nor their gel coat supplier was able to achieve 100% consistency in the shade of white of the parts coming out of the molds . . . and the gel coat supplied builders to cover the taped seams was often still another shade. Fastidious builders could not, of course, put up with this, so many of them began sanding off the gel coat and painting the entire airframe . . . while others simply painted over the gel coat. This defeated the labor saving purpose of the gel coat, and in the case of those who painted

over it, made the airplane unnecessarily heavy. Myron was something of an exception . . . he left his gel coat unpainted and did an excellent job of matching his seams with the rest of the airframe.

Since the early '80s when Myron ordered his first kit, Stoddard-Hamilton has stopped gel coating its airframe parts so builders can finish them however they desire. Also, a lot of work has been done to build in joggles along the edges of the parts so that they are easier to fit and bond together, which was part of what Myron was referring to when he said the Glasair III was much easier to put together.

Like the company, Myron also learned a lot during the 1980s, both in building his RG and in looking over other builder's projects at all the fly-ins he has subsequently attended, including Oshkosh. A person who has built an airplane is, of course, far more focused than anyone else when they examine other projects. They recall specific areas that were difficult for them and are interested in seeing how someone else solved the problem . . . and they are quick to recognize those inevitable "why didn't I think of that" items that the rest of us would miss. Over time, they acquire a mental list of ideas they would like to employ on their next project, and eventually reach a point where they can't rest until they are back in their shops putting them to use. In Myron's case, it was back on the cabana.

He readily acknowledges that a lot of what we see on his new Glasair III was inspired by clever things he saw on such trophy winners as Gary Lichte's RG and Gerry Gruber's III, often with some variations on those themes of his own. There are, for example, virtually no exposed screws on the airplane's exterior. They were either eliminated altogether or concealed in one manner or another. Everything is flush . . . the wingtips, lens for the lights, fairings, etc. At Prescott admirers of the airplane wondered how the cowl was attached, because there were no visible latches or screws. All were fascinated to learn that a custom retention system had been built inside the cowl, and that it could be released with just the movement of a little concealed lever . . . actuating a sliding pin system.

Interestingly, Myron had built up his instrument panel even before deciding to build a Glasair III. Combining all the good ideas he had observed on other airplanes with the "if I had it to do over" preferences he had accumulated while flying his RG for several years, he ultimately designed his own dream instrument panel . . . and installed it in the Glasair III when he began building it. The parts were molded out of fiberglass and trimmed in black leather . . . as you can see in the photos. Myron also molded fiberglass frames to go around all the windows in the cabin. Most builders simply leave the black rubber seals exposed, but he didn't like that so he molded his own frames. The result is a very finished, sophisticated look to the cabin. (All that work was probably the result of Myron's being part of a generation accustomed to cars with great attention to trim and decoration, inside and out. Face it, few of us over 50 types **really** like the black tires and all the ugly exposed black rubber on new cars today. We grew up on chrome, white walls, tail fins and bright colors . . . and, yes,

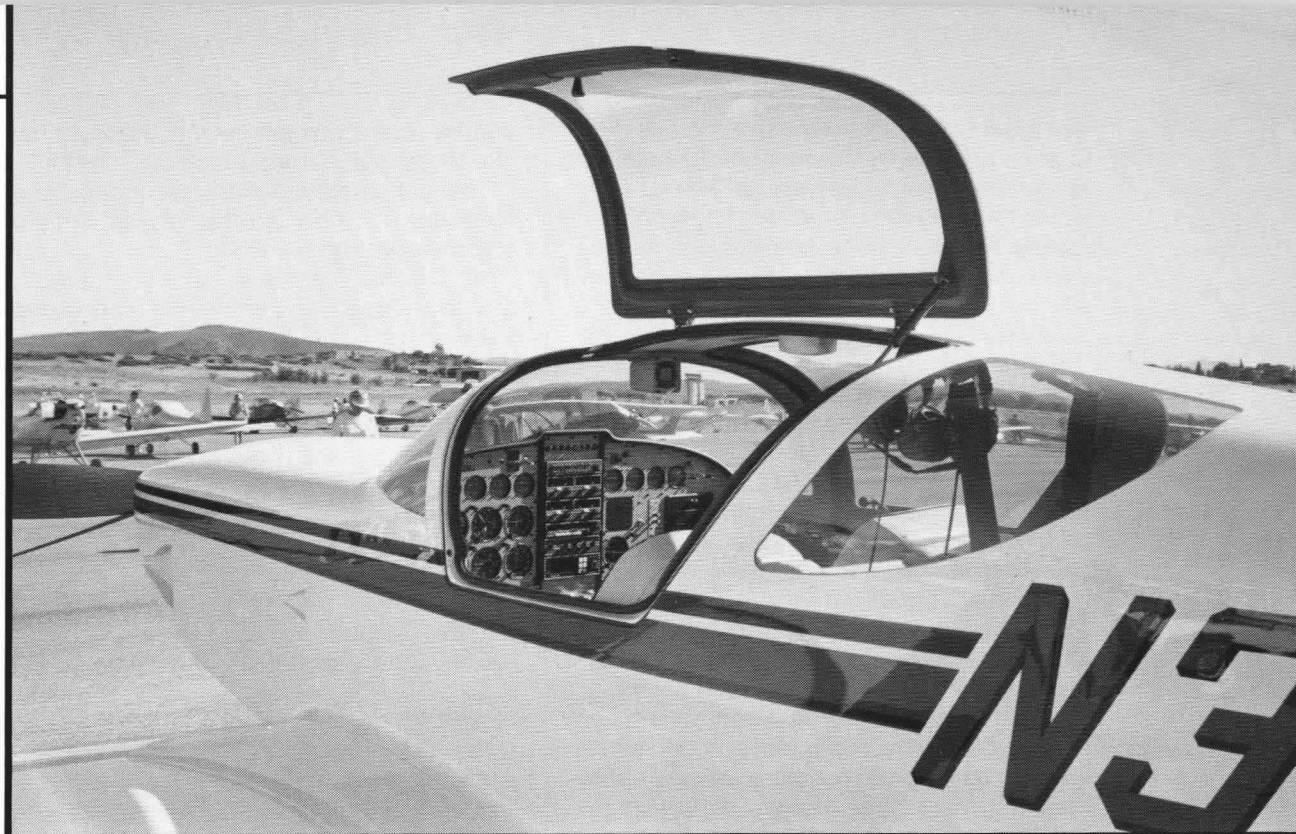
by golly, we liked it! I've said it . . . and I'm glad.)

Myron also had some very definite opinions on how he wanted his upholstery to look . . . and sit. He mocked up a seat out of plywood and went to a lot of effort cutting and fitting the foam for it . . . then spent enough time sitting on it to determine where foam should be added or removed to make it really comfortable on extended flights. When he was finally satisfied with the cushioning, he took the leather covering to an upholstery shop for sewing . . . but ran into some problems there. After one look at the initial effort, Myron rejected it out of hand. The seams were not perfectly parallel, the stitch spacing was not uniform . . . it was simply not acceptable. After still another rejection, Myron finally marked the stitch lines in chalk with a jig he built and saw to it that they were followed precisely. (Can't you imagine the upholsterer muttering to himself after Myron was finally on his way: "Geez, what kind of nuts are these airplane builders, anyway?" What he may not have known is that just "good enough" is not acceptable for anyone who has been to Oshkosh and seen the level of competition there.) The rest of the upholstery work, the cabin sidewalls, carpet,

etc., Myron did himself, so they, of course, met his level of expectation.

The high standards were retained right on in front of the firewall, too. An auto engine rebuilder from 'way back, and having overhauled the O-320 in his RG, Myron had no hesitation in building up a Lycoming IO-540 for his III. He bought a runout from an Aero-star, tore it down and made it like new again, mostly by himself. The cylinders were sent out for chroming and some minor porting and polishing and the reciprocating parts were balanced, but Myron put it all back together, painted the case, made all the adjustments, did the timing, etc., to make it run sweetly again. A new constant speed propeller was purchased . . . and wouldn't you know it, it would be the only component to produce any problems.

Then there was the paint job. Flush . . . everything had to be flush, Myron says. What he means is that none of the trim colors overlapped the basic paint, or vice versa. Each letter and number, each trim stripe was painted on . . . then all of it was masked off right down to the limit the human hand and eyeball can handle, after which the overall white paint was sprayed on. Each color was butted together, not overlapped. Following



that excruciating exercise, Myron proceeded to sand perhaps half or more of the paint off to get the adjoining layers to a level over which he could run a practiced finger without feeling a gap or ridge between them. This was extremely delicate work and occasionally he would sand through the paint in a given spot and have to touch up the area and start over. When he was finally satisfied with his efforts, he applied two coats of 50/50 clear, then sanded and buffed that to get the final, glass-like finish he wanted. The key element in his paint job, Myron says, was his use of Ditzler 8000 acrylic enamel (with hardener) "... which is very sandable, very easy to work with, especially when you don't have a paint booth."

Amazingly, Myron created his Grand Champion paint finish just as he had the rest of the airplane ... out in the open desert air ... on the cabana. "Yeah, I had to do it ... I didn't have any other place. I put some tarps up on the side, but there was still a little breeze coming through when I did my spraying. I got a little dirt in the finish, of course, but it all sanded out. That's why I used the acrylic enamel ... it's sandable." (This must bring tears to the eyes of builders who have gone to expensive extremes to build dust free paint booths, have slopped around on wetted down floors, etc., etc.)

True to the code of the dedicated home-builder, Myron just had to make a few minor modifications of his own. He did not, for example, build a header tank into the fuselage. He simply doesn't care for header tanks, he says. He has the extended tips available for the Glasair III built permanently onto his wing, but he did not choose to put fuel in them. "I was so happy with the fuel system in my RG ... just one tank and one shut-off valve ... that I decided to make it the same way in this one. I only have 53 gallons, which is the normal capacity, but that way I don't have to worry about forgetting to switch tanks. Not having a header tank also leaves more room behind the instrument panel.

"Another thing, originally the factory had this emergency lever for the hydraulic system sticking back in the seat. You had to pull the handle out of the seat, pump it and turn the valve. Well, I decided I didn't want it interfering with the seat, and since I had gone with the electric trim option, I had plenty of room to move it down in the floor and out of the way."

Although he is not instrument rated, Myron put in most of the instrumentation and avionics required for IFR. With the exception of the 618C Ioran, most of the avionics are by King ... all new ... and the engine instruments are Lance Turk's electronic jewels that are so popular today. He wired the airplane and installed the servo for an autopilot, but held off on the unit itself simply because the drive to finish the airplane was causing some pretty hefty bills to pile up. He intended to install the autopilot later, but now has some doubts about it. "If I had known how stable this airplane was going to be, I wouldn't have bothered with the autopilot. I needed one in the RG, but not in this one."

July 5, 1991 was the big day for Myron and the Glasair III. He had the airplane ready to go, but as a final check, he had his friend, Gary Lichte, climb in with him for a taxi test. "I got him in the right seat and we taxied around ... I wanted him to listen to the motor

and be sure it was idling O. K. Finally, I told him to get out ... and I took off."

This got us around to my second round of questions ... how did the Glasair III fly in comparison with his RG?

"It flies like a piece of cake compared to the other one, as far as I'm concerned. Everybody told me I should go to the factory and get checked out in the III. They said this is a high performance airplane ... you've been flying behind a lower horsepower, lower performance, fixed wood prop ... you better go get checked out at the factory. Well, I weighed everything out ... to my surprise the airplane came out at 1,544 pounds, which is a little lighter than the factory prototype ... and found that my wing loading with the extended tips was very similar to my RG. I figured that since I hadn't flown anything but the RG for years, this one couldn't seem that much different ... and it wasn't. As a matter of fact, it surprised the heck out of me, it was so much easier, so much more stable. After I got used to the constant speed prop ... that was something new for me ... it was easier to fly and land. It gets off quicker, just a lot easier."

Myron's initial experience with the constant speed prop was not so pleasant, however. The governor failed right after takeoff on his first flight, and he really had to struggle to make it around the pattern for a landing. "I was just barely hanging in the air, and I don't believe I could have made it back to the runway without the extended tips. I still made a great landing, though ... the best I've made in years. I got the governor straightened out and it has been O. K. ever since.

"Another thing people told me was to expect a lot of torque with this big motor. But as it's turned out, I'm applying only about half as much rudder on takeoff as I do in my RG, which was a big surprise. I was hunched down in my seat ready to stick the rudder to it, but I didn't have to do that. Whatever it is in the III ... the bigger rudder, longer fuselage, whatever ... it works. I probably land the III a little faster than the RG, but it is so solid and so stable that it seems a lot easier. It doesn't wander around as much as the other one."

Asked about performance, Myron said, "Well, I have about 28 hours on it now (this was at Prescott in October) so I haven't been pushing it hard because the engine was still being broken in. I've been cruising about 270 mph indicated at 8,000 feet on 24 inches of manifold pressure, which I think is pretty good, but I haven't opened it up yet. It'll go faster, of course, when I can. I'm really happy with it."

Myron Jenkins grew up in Iowa and came to California during World War II courtesy of Uncle Sam. Like so many others, he remained there after VJ Day and eventually went into the business of making and installing marine electrical equipment. He was successful enough in this and other endeavors to retire at 45 and he and Marie have been enjoying their Colorado River home in Parker, Arizona ever since. The Glasairs have added a new dimension to their lives, allowing them to strap in and go flying off whenever and wherever they please. The satisfaction that comes with building and the trophies for Myron's superb craftsmanship are well-deserved frosting on the cake. ▼

One of the neatest little showplanes at Merced '91 was the 2/3 scale Jenny you see pictured here. Built by Walter L. Treadwell of Walnut Creek, CA, the workmanship was absolutely first class ... and watching it zip around the fly-by pattern, it was obvious it flew as well as it looked.

The Jenny is the second homebuilt Walter has constructed, the first being a Lancair 235. He says he enjoys having airplanes at the opposite ends of the performance spectrum, and thought it was fun to build airframes out of such totally different materials.

Walter bought the plans for the Jenny from designer Dennis Wiley's Early Bird Aircraft Company in Erie, Colorado and the set of pre-stamped aluminum ribs sold by LEAF, but built almost everything else, including the zillion and one fittings that had to be hacked out of 4130 steel. An experienced RC modeler of long standing, Walter did not find the tube and rag method of construction to be unfamiliar and enjoyed the work. Not a welder, he did seek help in building the steel tube fuselage. He cut the tubing and assembled it in place in a jig he had built, but had a friend who is in the business TIG weld the entire assembly.

The spars are the typical inch and a half diameter aluminum tubes used in ultralight wings, and, in fact, the LEAF aluminum ribs are also used by ultralighters. The Early Bird plans show simple round tube interplane struts, but Walter felt they took away too much of the Jenny look, so he reengineered that portion of the structure, coming up with appropriately sized streamlined wooden struts instead.

The wheels and brakes were liberated from a Yamaha YZ-80 motorcycle, and the covers were found in an old bicycle shop. The tailwheel is Walter's concoction, built up out of components from several sources. Real Jennies had tail skids, of course, but that would have been impractical in today's paved airport environment.

The engine is a liquid cooled Rotax 582 (60 hp) completely buried in a fake Jenny cowl. To make the engine fit inside, Walter had to reverse the engine's reduction gearbox. The Jennies of old had a radiator in the nose with the prop shaft extending through it. Walter's has a screen up front that looks something like a radiator ... and actually does have a radiator (from a Kitfox) for the Rotax behind it and below the engine. The muffler/tuned exhaust is mounted outside the cowl on the right side, which is a change in the standard Rotax flow path of the exhaust gases. It runs the same, but has a different, throaty sound that is more like what one would expect from a 4-cycle engine. There is little of the ring-a-ding 2-cycle sound. Walter had the propeller custom made in Texas ... with a bit of a scimitar shape and stained to match the struts. It is 72 inches long and has a 36 inch pitch.

1.6 ounce Stits fabric and liquids were used to cover and finish the little Jenny. The paint scheme is a variation of that on the real Jenny owned by Walter's friend, Jim Nissen, of Livermore, CA. Jim's airplane is finished in World War I Love Field, TX training school colors and markings and carries the number 43. Walter graduated from flying school at Luke Field in Arizona during World War II,



WALTER TREADWELL'S **2/3 SCALE JENNY**

so he has that name on the sides of his mini-Jenny (sorry, I couldn't help myself!) and the number 34.

Some finishing touches included a strobe light Walter made from components purchased at Radio Shack for about \$20 ... and a mounting bracket in the rear cockpit for a little hand held loran, which he says works splendidly.

When finally completed, the Jenny proved to have an empty weight of 504 pounds. At 5,800 engine rpm, it cruises at 70 mph and burns 4 gph. It still handles well at 37 mph indicated, and finally stalls at 33. With the prop being used, the takeoff and rate of climb are spectacular: it's off, solo, in about 75 feet and climbs initially at a solid 1,200 to 1,300 fpm. Its climb is a kind of level fuselage levitation, Walter says, instead of the nose up attitude common to most aircraft. When we talked to Walter at the Merced, CA fly-in last June, he had only recently flown off the time on the Jenny and was just beginning to enjoy making the rounds of the fly-in circuit. The previous weekend he had flown in formation to the Watsonville, CA fly-in with Jim Nissen

and his Jenny. The real thing cruises at about 62 mph, Walter says, so he has to throttle back his 2/3 scale version to stay with the golden oldie. The little machine is simply pure fun to fly, and empties out FBO lounges every time he lands somewhere for fuel.

Walter Treadwell was born in Seattle, but his family moved back to the San Francisco area shortly afterwards (his father was with the FBI) and he grew up there. He learned to fly at the Oakland airport in a J-3 Cub and soloed on December 7, 1941.

"I landed and found out we had a war going on!"

At the time, Walter was in his sophomore year at the University of California at Berkeley studying mechanical engineering, but as soon as the school year was over he joined the Air Force ... and was accepted for the Aviation Cadet program. The next couple of years were a blur of training activity and transfers to new bases ... the high spots of which were:

- Basic training at King City, CA in the Ryan PT-22

- Basic training at Castle Air Force Base, Merced, CA in the BT-13

- Advanced training at Luke Field, Phoenix in the AT-6 ... followed by fighter school in the P-40

- Instructor school at Randolph Field in San Antonio, and ...

- Back to Merced as an instructor

After about a year in the Training Command, Walter finally got a transfer to what he hoped was combat duty ... but in bombers instead of fighters. He was sent to Columbia and Greenville, SC for transition to B-25s, and soon was on his way to a squadron in New Guinea. As the Japanese were pushed back in the great island hopping campaign of the final years of the Pacific war, Walter's unit operated for a time from the Philippines and, finally, from a small island base near Okinawa. An airplane from his squadron was one of two that brought the Japanese surrender team back from Japan to the island.

After the war, Walter returned to Berkeley and finished his college education. He also joined an active reserve unit flying out of the



Walter Treadwell

old Hamilton AFB and would remain with it for about 18 years. The jet age dawned during his reserve years and he had the pleasure of flying the F-86 for a time.

Meanwhile, after college, he went to work full time for Moore Dry Dock (he had worked there part time during college, both before and after the war). Soon, however, he moved on to Pacific Coast Engineering where he was involved in building tugboats, ferry boats, barges and all sorts of marine equipment. He was later to be instrumental in getting the company into a new line of business, making it the largest shore based container crane builder in the world. By the time he retired in 1975, he was the company's vice president of operations.

For many years Walter had been heavily into sailboats and sailboat racing as a hobby, and after his retirement, he took one of his

boats and went to Mexico for a year. Alas, however, he found the good life to be not completely to his liking, so, finally deciding he was simply too young to retire, he sailed home and went to work again . . . this time for Rigging International in Oakland. For the next nine years, he traveled the world over to ramrod all manner of heavy rigging jobs . . . then retired again in 1985 . . . more or less. Actually, he became a construction management consultant for a friend's company. The work involved a lot of travel around California, with stage lengths he immediately recognized could be most efficiently traversed in a lightplane. Taking up flying again, he zipped around the state for a while but found, paradoxically, that the time he saved was more of a curse than it was a blessing . . . turning out to be a void that he somehow had to fill. A builder of RC model

airplanes for a long time, he eventually began to consider the possibility of building a real one. That led to the aforementioned Lancair 235 project and, ultimately, to the 2/3 scale Jenny.

At Merced '91, Walter told me that although he was having a ball flying the Lancair and the Jenny, he was suffering from serious builder withdrawal pains and was in dire need of getting started on still another project. He had decided to sell the Lancair and was leaning heavily toward building an amphibian of some sort.

"With all the delta to play around in just east of where I live, that would be my choice. I have a seaplane license and always enjoyed flying off water."

That, folks, is the kind of "retirement" we can all wish for!





Justin Mace's Dragonfly... **POWERED BY SUBARU**

There are more automobile engines powering airplanes today than at any other time in history . . . and a greater variety of them. There are both negative and positive reasons why this is happening. First, the negative: the absolutely outrageous prices of new certified aircraft engines . . . ditto parts . . . ditto overhauls, because of the prices of the parts; the growing scarcity of used certified engines; and the fact that certified aircooled aircraft engines are gas guzzlers by design . . . using some fuel for cooling. And then the positive reasons: auto engines are readily available, either new or out of low mileage cars that have been rear ended; they are dirt cheap by aircraft standards; they are getting lighter every year as the auto manufacturers strive to meet government imposed fuel consumption standards . . . and with their computer controlled fuel and ignition systems, they are, indeed, fuel efficient; parts are available almost anywhere . . . cheap; and a number of good reduction units, both belt drive and gears, are now available.

Of course, auto engine conversions are nothing new. They've been with us since the dawn of aviation, but other than the ubiquitous VW Beetle engine, how many can we say have been completely successful and used in significant numbers for significant hours of operation? The Javelin Ford V-6 is currently being installed in several hundred homebuilts, and a number of them are already flying and piling up hours, so it is likely to be the first to meet our criteria of success.

There are others coming along (such as Aircraft Spruce's Buick V-8) that look extremely promising, and we saw one of them at the Copperstate Fly-In last October at Prescott, Arizona. Justin Mace of Tucson flew his Subaru Legacy powered Dragonfly to the event, with Lou Ross, the designer and manufacturer of the reduction unit used on his engine, as his passenger.

The Subaru Legacy engine looks like it was intended for aircraft use. It's a water cooled flat four that pumps out 130 hp at 5,400 rpm (and 137 foot pounds of torque at 4,400 rpm) from 2,212 cc. It has four valves

per cylinder and, of course, a modern computer operated fuel injection system and electronic ignition. With its radiator, hoses, coolant and Ross planetary gearbox, it is considerably heavier than the air cooled VW engine it replaced . . . but it also produces a lot more horsepower.

Justin Mace is unique in that when he began building his Dragonfly, he was not a pilot. He had always wanted to learn to fly, but had always been successful in coming up with reasons not to . . . so, he reasoned that if he went to the time, effort and expense to build an airplane, he would be compelled to learn to fly it. Ultimately, he chose the Dragonfly as his ticket into the wild blue yonder . . . just about the time Rex Taylor was announcing the creation of a builder's school at his HAPI engine facilities at the Eloy, AZ airport. The deal was that purchasers of Dragonfly kits had the option of coming to Eloy for a week or so and building the basic composite Dragonfly airframe in the company tooling under expert supervision. Justin, it turned out, was the first customer to sign up for the



school. He went on to complete his home-built, was taught to fly in it by Rex Taylor (although to get the required instrument instruction, he also checked out in a Beech Skipper and took his Private test in it) and had logged 277 hours in the Dragonfly by the time he touched down at Prescott last October.

All those hours had not been pleasant ones, however. Justin says there are those who swear by the VW engine and those who swear at them . . . and he is one of the latter. He's had bad luck with two of them in the Dragonfly, one of which suffered a broken crank while in flight. Fortunately, he was within 3 miles of an airport and was able to make a successful landing on its runway. The experience soured him on the VW, however, and initiated his search for a different powerplant.

Justin's ultimate selection of the Subaru Legacy engine to replace his VW came rather naturally. He had long had an interest in auto conversions and had already identified the Subaru as a likely candidate, simply because of its flat four configuration and its reputation for reliability in cars. The clincher, however, was the fact that Lou Ross' shop was nearby in Tucson . . . and Lou made a planetary gear reduction unit that would bolt right onto the Subaru.

Lou Ross is probably a familiar name for a lot of you. If you were a modeler in years past . . . then, yes, he's the same Lou Ross who used to make model airplane and drone engines, among other things. Today, he builds reduction units for a variety of auto engines being converted for aircraft use. His planetary gearbox has the advantage of being very small in diameter so that it is easily cowled, yet is also long enough to put the prop far enough out in front of the engine to allow a nice, sleek looking, low drag cowl to be designed around it. Aside from his talent

and long experience, Lou's greatest virtue is his passion for his work. He is absolutely fervent in his belief that auto engines can be made to work successfully in aircraft . . . and that his gearbox is the key to that success. If you want to hear the case for the auto engine expressed in near evangelical zeal, just get into a conversation with Lou sometime.

From the beginning, Justin had a goal in mind that he was determined to stick to: the

engine had to be kept as absolutely stock as possible. He says that he sees no point in using an automobile engine if it is to be modified with all sorts of expensive aftermarket racing parts that, in the end, make it as expensive as a certified aircraft engine . . . or even a good used one. He bought his engine at an auto junk yard in Phoenix - after it had been operated just 2,000 miles in a car. He took the oil pan off to install fittings for the gearbox oil return and the oil temp gage, and



Justin Mace (sitting on the canard) holds court on his Subaru Legacy powered Dragonfly. Note the long planetary reduction drive . . . by Lou Ross.



found the bottom end to look "... like a Swiss watch."

"It has a windage tray around the crank and two baffles in the pan ... a really well built engine. I'm really impressed."

Only the intake and exhaust systems were modified ... and only then to make the engine fit inside the cowling. A four-into-one exhaust system running through a home-made glass pack muffler was fitted, but everything else ... the stock starter, alternator and aforementioned ignition and fuel systems were left just as they had been installed at the Subaru factory.

The engine was turned over to Lou Ross for installation of the planetary gearbox. Lou has devised an adaptor plate that allows the reduction unit to bolt right onto the engine, with just an oil line remaining to be hooked up.

"I've got engine oil running to the gearbox and a drain back. Lou has an .080 orifice in the gear box so you're getting just a little oil to it. The gear box has roller bearings in it ... great big monstrous things ... with the Ford planetary gear shaft. The current reduction ratio is 1.85 to 1."

The radiator for the engine is located in a belly scoop, a la Mustang. It's a 1986 Buick Electra evaporator core through which 8 quarts of coolant ... 50/50 water and anti-freeze ... are circulated to cool the engine.

Justin made his own 7 point engine mount over a period of about 2 days. He simply hoisted the engine into the proper relationship with the firewall and utilized the age old art of cutting and fitting to make the mount ready for finish welding. An experienced welder, he accomplished that task himself.

When the conversion was completed, the Dragonfly was found to weigh 843 pounds empty ... "about a half a ton more than when it had VWs in it," Justin says with a chuckle. "The whole Subaru package weighs close to 300 pounds. The magnesium case VWs I ran before were considerably lighter, but I think I'll have more reliability with the new engine. The airplane first flew on 60 hp, then 80 hp, so if I pull just 110 of the 130 hp available from the Subaru ... about 110 hp at 4,200 engine rpm ... I figure I'll have a dependable powerplant. So far, the water temperature has been running about 205 to 210 degrees, and maybe 225 on a long, hard climbout. The oil temperature runs about 20 degrees higher, which is normal for an automobile. I'm using synthetic oil in it and it runs great."

The FAA required Justin to fly a 25 hour test period to prove the Subaru airworthy, and he spent most of it just boring holes in the sky at 19 inches and 130 mph indicated. To his amazement, the engine burned only 3 gph at that power, which was better than the VWs he had previously had in the airplane. He attributes the fuel efficiency to the engine's liquid cooling ... the fact that it does not have to run an extra rich mixture to aid cooling ... and the computer driven fuel and ignition systems that provide a nearly ideal combination of fuel, air and spark timing for every power stroke that occurs.

The three blade propeller you see in the photos is by Performance Propellers of Patagonia, AZ ... about which Justin says: "This is a cruise prop. I initially had a climb prop on it and was doing over 1,000 fpm at 120 mph with just myself or with a passenger, it didn't seem to make a whole lot of

difference. With this prop, it climbs best at 110 mph and probably 850 fpm. It's faster, though. Lou Ross and I flew to Prescott from Tucson at 8,500 feet and we indicated 140 mph at 21 inches and 4,200 engine rpm ... and the engine will run a lot harder than that. I'll know a lot more about what it can do as I continue to build time on it, but at just under 40 hours, I am very pleased with the Subaru engine. It starts like a car, is very smooth, is fuel efficient ... and it didn't cost a lot, initially."

Justin Mace is a native of Champaign, IL who has been living in Tucson since 1973. He was a steam turbine and big boiler mechanic for most of his working life, but today he is a boiler inspector for the Hartford Steam Boiler Inspection Insurance Company.

A LITTLE PERSPECTIVE

Everyone who really knows anything about aviation is aware that it is far too expensive to involve the percentage of the population most of us feel is necessary to ensure the future of personal flying. It's a

cruise power, that engine burns about 10 gph, or \$20.00 per hour just for gasoline. Lycoming has to charge that much for the engine because it is currently making only a few hundred of them per year, and it uses that much fuel because it is air cooled and part of the over-rich (by auto engine standards) mixture helps cool the heads. The engine, though well built and very reliable, is late 1930s technology and is simply as inappropriate in today's world as one of our 8 mpg road hogs of the 1960s would be on today's highways.

Somehow we must break out of the vicious circle of aircraft engine cost and fuel inefficiency if we ever hope to lower the cost of airplanes and their operation ... and we **have** to do it if personal flying is to have a future. The only feasible answer, it seems, is to develop dependable aircraft engines based on very high volume production unit components ... which means automobile engines. Fortunately, auto engine technology is moving in our direction ... they are getting lighter and more fuel efficient as each model year goes by. Subject to the most intense competitive forces in the world today,



hard fact of life that if an activity is limited to what is perceived as a select few, the general public has little interest in seeing that such an activity survives. That is aviation's present dilemma ... it is seen as a rich man's game by most people, and few of them would care less if we were legislated out of the air entirely. To make personal flying more acceptable, it must be made more accessible ... and to be more accessible, airplanes must somehow be made less expensive to buy and to operate. The single most expensive part of any airplane is its engine, and with av gas averaging two bucks per gallon in most parts of the country today, the most expensive cost of operation is the cost per hour of fuel. The engine, therefore, must be our initial point of attack.

Currently, for example, the retail price of a 180 hp Lycoming O-360 engine is nearly \$25,000, which is the price of fully equipped Buick or, say, a Nissan Maxima. At 75%

autos ... and their engines ... are now being shaped by the most advanced technology available ... technology general aviation manufacturers cannot hope to afford. It is, nevertheless, technology we desperately need to keep personal flying alive, so every effort must be expended to utilize it.

Ideally, we would like to see the auto makers spin off some of their expertise and vast resources into the development of aircraft versions of their auto engines ... and it's no longer a secret that Toyota is doing just that today with its Lexus V-8 ... but, in the meantime, it is very important that the Justin Maces of the aviation world show by their individual initiative that it can be done. The automotive market has limits like everything else, and eventually the car makers will begin to look for other places to sell their wares ... and it will be easier to get them to look in our direction if we have something already successful to entice them. ☺



Roger Lloyd

LIBERTY SPORT

On April 17, 1965 a new 2-place, open cockpit, homebuilt biplane made its initial flight at Falcon Field in Mesa, Arizona. Designed and built by Orval N. Lloyd of Mesa and his brother, Liberty Lloyd, it was named the Liberty Sport Model A and had the FAA registration number N185L. Rather large for a homebuilt, it had a span of 28 feet and a length of 22 feet and 4 inches . . . and an empty weight of 1,325 pounds. For its size, it was modestly but adequately powered by a 150 hp Lycoming O-320 that produced a max speed of 120 mph and a cruise of 105. The rate of climb at sea level was 900 fpm. With 224 sq. ft. of wing area, it landed at just 50 mph.

The Liberty Sport was of conventional construction . . . welded steel tube fuselage and tail feathers, spruce spars and metal ribs, a steel Wittman-type leaf spring landing gear and Ceconite covering. The upper wing was swept and the lower one was straight, and only the lower wing had ailerons. Two things stood out: it was flown from the front cockpit, which was unusual for a tandem seat biplane, and it was painted to resemble the old Curtiss Helldiver biplanes of the 1930s. In 1965 there were enough aviation enthusiasts still around who had admired the

Helldivers when they were the latest thing in Navy dive bombers, so the Liberty Sport instantly became one of the most photographed sportplanes of the decade.

As the biplane had neared completion, Orval Lloyd, who was a construction supervisor by trade, was sent to England by the Mormon church to work there. With the EAA Convention at Rockford, IL just months away, the completion of the airplane was accomplished by a group known as the Mesa Aviation Development Association (MADA). At that time the AC Spark Plug division of General Motors sponsored a Flight Rally that pilots could participate in on their way to the Convention, and Don Fletcher and John Krupa, who were flying the Liberty Sport to Rockford, decided to enter. Flying the Kansas City to Rockford western leg, they ended up the overall homebuilt winner with a score of 195.22 out of a possible 200 points . . . which earned them a nice trophy and a then generous \$300 prize.

Over the next decade, the Liberty Sport was a familiar sight at Rockford and Oshkosh, seeming to be in the air almost constantly. One reason was the fact that the well-known aviation photographer Howard Levy often used it as a photo plane. With the

pilot in the front cockpit, he could shoot from the rear 'pit, which was well aft of the wings, with an almost unobstructed field of view. Howard still considers the Liberty Sport to be one of his all-time favorite photo planes.

Initially, there was talk of plans being made available, but with their jobs and church work, the brothers Lloyd simply never got around to it. A Liberty Sport model airplane kit was marketed by SIG and proved to be very popular, but until last year the sport aviation world would never see another example of the design.

At the Cactus Fly-In at Casa Grande in March of 1991, the second Liberty Sport, this one the Model B, made its fly-in debut. Flown in from Mesa by Orval Lloyd's son, Roger, it was easily recognizable as a Liberty Sport, but did have some obvious changes to differentiate it from the Model A. The first thing we noticed as it taxied in was a deep rumble that made it clear the Model B was powered with something larger and more powerful than a Lycoming O-320 . . . and, also, it was apparent that the airplane was being piloted from the rear seat . . . with a bubble canopy over it. There was a front cockpit, but it was open to the sun and slipstream like the original Model A. Roger's son was riding up

there.

Talking to Roger a little later, we learned that the Liberty Sport Model B was powered by a six-cylinder, 190 horsepower Lycoming O-435, a surplus military engine his father, Orval, had bought from a friend many years before and had been saving to put in this airplane. The nose of the airplane had been lengthened somewhat, even with the heavier engine, so that the Model B could be soloed from the rear seat. Otherwise, Roger said, the airframe was essentially unchanged.

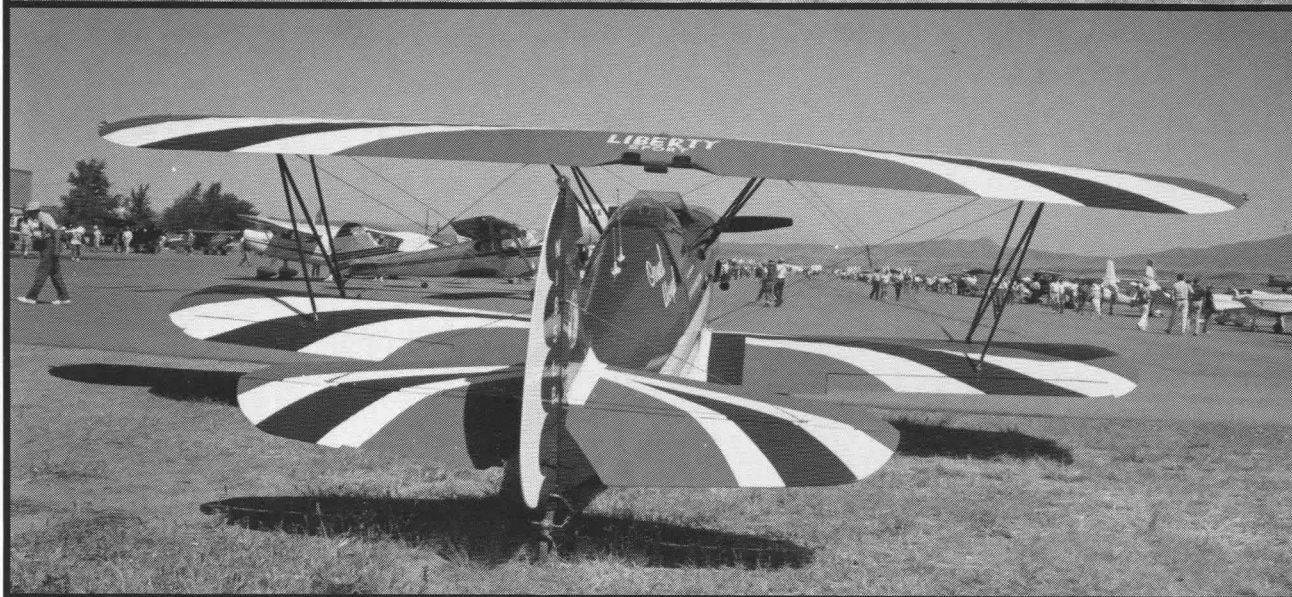
Orval and his brother, Liberty, had long since moved to Salt Lake City, we were told, and Roger, like his father before him, was a construction supervisor living in Mesa, AZ. Orval had started building the Model B in 1969, but work slowed after he underwent open heart surgery. Every year when Roger and his family took their vacation in Salt Lake City, he and his father would work on the project . . . but Orval would go back to quarter scale modeling after Roger left. Recently, however, the construction business has been slow in the Phoenix area, so Roger was able to return and, with his father, work full time on the Model B until it was finished in the summer of 1990. That fall, after the FAA required test time was flown off, Roger flew the airplane to Mesa for the winter. The plan was for Orval to keep it during the summer in Salt Lake City where he had friends who would give him rides in it, and in the winter Roger would keep it at Mesa.

The Model B Liberty Sport has a "convertible" front cockpit. It can be flown open cockpit, or a metal hatch can be fitted over the front 'pit to make the airplane appear to be a long nosed single place machine. Roger says he really can't tell any difference in the performance or handling with the cover on or off. The Model B is covered with Ceconite and is finished with butyrate dope over a nitrate base coat. The metal is finished with automotive acrylic paint. The wooden prop

was carved by Ray Hegy years ago and sat on the shelf awaiting completion of the airplane. Roger says that the ol' master hit the diameter and pitch just right, giving the Model B a good compromise between rate of climb and cruise speed. With the larger engine, the takeoff roll and rate of climb are improved over the Model A, but as would be expected, the cruise speed is little changed.

Whatever happened to the original Liberty

Sport? Roger says his uncle, Liberty Lloyd, still has it in Salt Lake City and has just recently restored it. The engine was overhauled and the airframe was recovered . . . but the greatly admired Helldiver paint scheme was retained. Roger had the Model B at the Copperstate Fly-In at Prescott last October, but the Model A did not make it. Hopefully, we'll see both of them together at fly-ins this year. ▼





JACK COMPERE'S . . . **ERCOUPE**

One day in the early 1940s a young man walked into the CAA office in Houston, intent on the most important mission of his life to that point. Before he could speak a word, however, a hard bitten public servant took one look at him and snarled, "If you're coming to talk to me about getting a license, just forget it."

Forget it? Just turn around and walk out . . . and never again experience the excitement the mere sound of an airplane flying over had stirred in his soul for as long as he could remember? Never dream again of disappearing over the far horizon to explore the world beyond?

Never!

Jack Compere did turn and haltingly made his way out of the office as quickly as his crutches would allow him to move his polio ravaged legs . . . but he didn't forget . . . he never stopped dreaming . . . and he didn't waver for a moment over the next 40 years in his determination to someday fly his own airplane.

Throughout the rest of the '40s and into the 1950s, Jack got on with his life . . . met and married his wife, Marie, began a family and progressed as best he could in his profession.

"By the mid '50s, though, I just ran out of work back there in Texas. At that time it was hard for anybody with any kind of handicap to get any kind of work in that part of the country, so we moved to California in 1955. There, people seemed to be more progressive in their thinking and I was never out of work again. I went to work for an electric

component distributor, and after a number of years they transferred me to San Diego to be the area manager there. I left the company in 1972 and started a manufacturer's representative organization of my own. I finally retired at the end of 1985."

Over the years a scheme had been developing in Jack's mind, a scheme that would make it possible for him at long last to realize his dream of personal flight. Since that terrible day in the CAA office in Houston, he had come to know that the 2-control Ercoupe was an airplane he could fly as well as any other person, so he learned everything he could about the design, about what he would have to learn to be a pilot . . . and how he might go about getting instruction and earning his Private license. What he had decided to do was locate and buy an Ercoupe, hire someone to teach him to fly it . . . then go to the FAA and demonstrate that indeed he was capable of becoming a competent pilot.

The first item on Jack's checklist was to locate a special version of the Ercoupe. He and Marie had a daughter living in Pagosa Springs, Colorado, where the local airport's field elevation was 7,700 feet . . . so, he began searching for a 'Coupe that would perform at that altitude, one that had been upgraded from a C-85 to an O-200 Continental (100 hp). It took about 6 months but he finally found and purchased one at Santa Ynez, CA . . . a 1946 Model 415C, N3047H, Serial Number 3762. Jack learned to fly in the airplane, flew with an FAA examiner for his Private flight test . . . and not only passed but was pleased to have written in his log

book: "Above average judgment and control."

When purchased, the Ercoupe had been out of license for 3 years and things like the upholstery had deteriorated quite a bit, but Jack and Marie slowly began to get it back into shape. Over the next few years they had an oil filter system installed, put on a set of aftermarket fiberglass wheel pants, and had the prop repitched to increase their rate of climb.

By 1989, the Comperes had moved to Prescott, AZ, and after getting settled in their new home, Jack began looking for someone to recover the wings. Floyd Newton, the Stits representative in the area, suggested a craftsman in the Phoenix area, so the Ercoupe was flown to the Deer Valley airport where the wings were removed and taken to the fellow's shop for refurbishment. Finished up through silver, the wings were later reinstalled and the airplane was flown back to Prescott for a complete new paint job. Jack and Marie had worked on a paint design for some time and had finally decided on the basically yellow scheme you see pictured here. By the time the job was done, the Comperes had moved back to California, to Paso Robles, so in February of 1990 Jack retrieved the Ercoupe and flew it home.

Since buying N3047H, Jack and Marie have flown it all over the West. They have visited their daughter in Colorado several times, and take in all the fly-ins. They flew it to the EAA fly-in in Arlington, WA last summer and took home one of the Classic awards . . . and were winners again at the

Copperstate EAA fly-in at Prescott in October. One of their proudest moments was meeting Fred Weick, the designer of the Ercoupe, and his wife, Dorothy, at Minden, Nebraska a few years ago. Jack thanked Fred for making his lifelong dream of flight possible and fondly recalls that he simply smiled and was very humble in accepting the praise. The Ercoupe was not specifically designed for persons unable to use their legs, but over the past five decades scores of them have taken wing, thanks to Fred's 2-control system. It's a service to mankind Fred has every right to be proud of.

Jack, who is 71 today, contracted polio when he was 17. "I've never had any complaints," he says. "I've done just about everything I've wanted to do, and finally getting to fly is just gravy . . . I love it. It's so much fun . . . I love to take trips, to go places. A lot of the fun is just planning the trip, charting it out, getting ready. I'm getting ready to upgrade my radios and add a loran, but actually I enjoy just flying with my finger on a chart. I like to match up what I'm seeing down on the ground with the chart. I sure enjoy geography now!"

THE ERCOUBE

The Ercoupe was designed by Fred E. Weick, one of the truly great names in the history of aeronautical engineering. Born in Chicago in 1899 and educated at the University of Illinois, he soloed in a Jenny in November of 1923 and went to work for the Bureau of Aeronautics in Washington early in 1924. There and later with the NACA in Langley, VA Fred became one of the world's leading authorities on propellers and eventually wrote the textbook on the subject that would be used for decades by colleges and universities. He also led the team that designed the NACA cowling for radial engines,



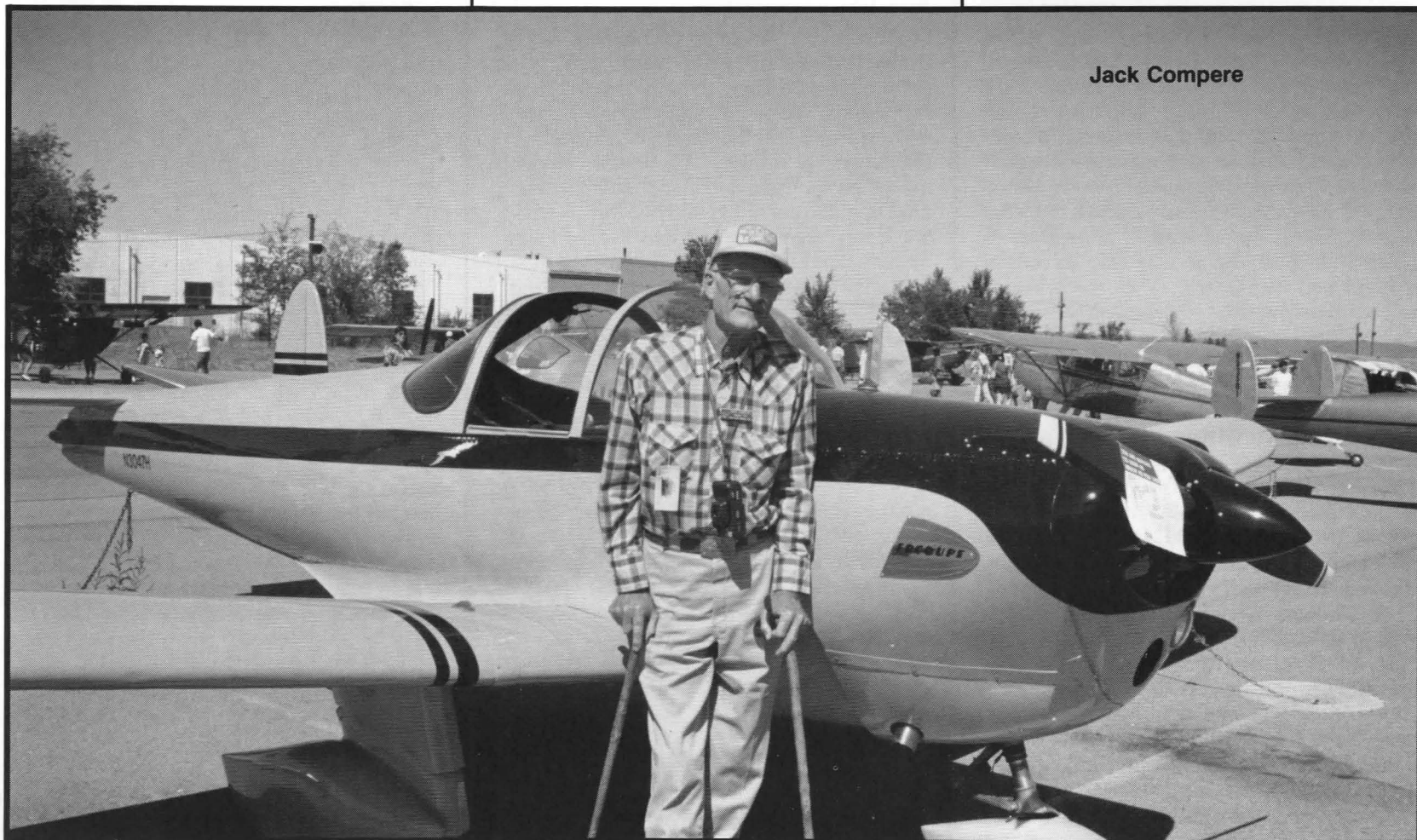
for which he was awarded the Collier Trophy in 1929. During his work with the NACA, Fred either authored or co-authored literally scores of technical reports on original aeronautical research that had a great positive influence on the still young science of aeronautics. He would also obtain a number of aviation related patents over the years.

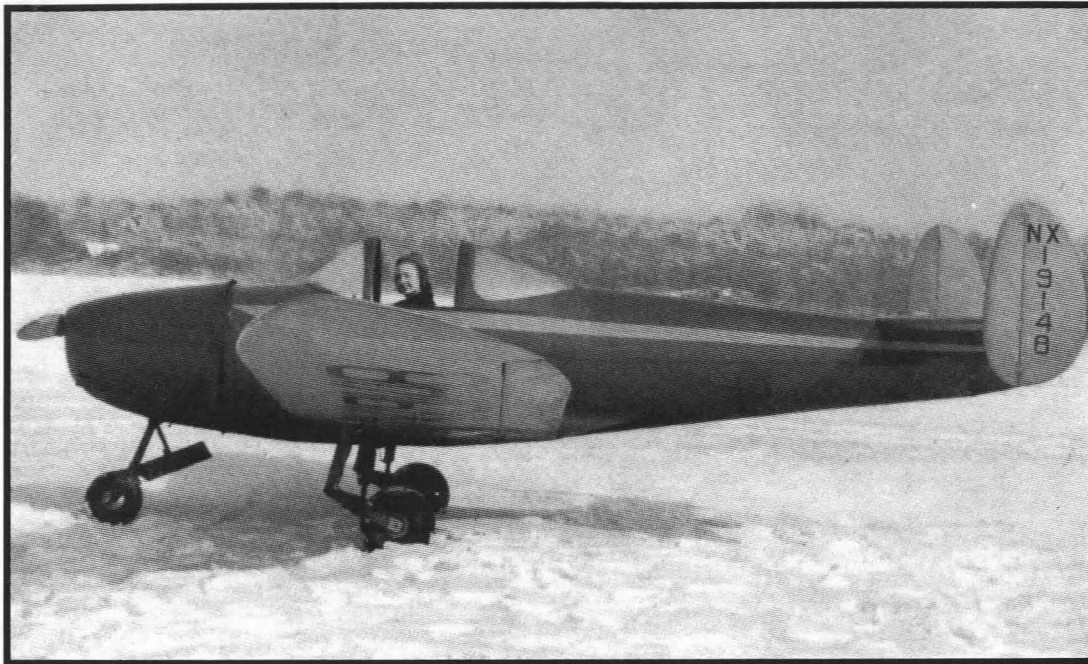
After a brief stint in industry in the late '20s, Fred returned to the NACA in 1930 and began basic research on the stall/spin problem that was the number one cause of fatal accidents at the time. This led to an after hours, personal project . . . in which he was joined by a number of his NACA colleagues . . . to develop a small airplane that was safer than anything available up to that time. The resulting Weick W-1 of 1934 was a landmark aircraft design, the most lasting feature of which has been the tricycle landing gear.

Nose wheel landing gears had been utilized by Glenn Curtiss and others in the roughly two and a half decades before the W-1 was built, but few had involved nose wheel casting or steering and none had addressed the problems of nose wheel shimmy and the proper placement of the main gear in relation to the CG. All these problems were worked out by Fred and his colleagues and thus the modern tricycle gear can be said to have begun with the W-1. Fred was awarded patents on a number of the W-1s features and many would find their way into subsequent aircraft designs.

Another significant feature of the W-1 . . . one that would play a very important part in Fred's future . . . was its 2-axis control system. Such a system, with the ailerons and rudder tied together, had been empirically devised and utilized by the Wright brothers,

Jack Compere





The ERCO Model 310, powered by the ERCO Model II-116 engine, an in-line, 4-cylinder, aircooled powerplant rated at 60 hp. It was designed for ERCO by Harold Morehouse. The lady posing with the airplane must have been quite small.

but the theoretical basis for it was not arrived at until the time of the W-1. The analysis was done by Fred's brilliant scientific aide, Robert T. Jones, who went on to become one of the world's leading aerodynamicists . . . and, ultimately, an Ercoupe owner.

Even before it was completed, the W-1 would play another important role in aviation history. After the election of Franklin D. Roosevelt in 1932, an order went out to all government agencies directing each to come up with "pump priming" programs to put people back to work and bring the great depression of that decade to an end. One of the programs instituted by Eugene L. Vidal, the director of the Aeronautics Branch of the Department of Commerce (the equivalent of today's FAA administrator), was what came to be popularly known as the \$700 Airplane Contest. The goal was to get more people flying, which would provide more jobs; and the way to get more people flying, Vidal reasoned, was to make airplanes safer, easier to fly, more like cars in creature comforts and significantly less expensive. A government sponsored competition was devised to spur the design of such aircraft, with the winning company to receive a contract to build 25 of them for use by Department of Commerce inspectors. The Aeronautics Branch personnel put in charge of writing the rules for the contest had no idea where to start, however, so they were greatly relieved a short time later to discover that Fred Weick and his associates had already designed an airplane, the W-1, that met many of the criteria Vidal had set forth for his \$700 Airplane. The result was that the Aeronautics Branch paid to have the W-1 tested in the NACA full scale wind tunnel at Langley Field and later flight tested . . . with Fred calling in the results on virtually a daily basis. The \$700 Airplane Contest rules were literally written around the W-1 test results, and, in fact, an improved version, the W-1A, was the recipient of a development grant in the competition. The winner, nevertheless, was the Stearman-Hammond Y-125, which though produced in small numbers, was not a commercial success because, ironically, it was very expensive to build. (If you sub-

scribed to **Sportsman Pilot** after 1987, you may be interested to know that the most comprehensive article ever written on the \$700 Airplane Contest appeared in our Spring 1987 issue, Volume 7, Number 1, a few of which are still available.)

In October of 1936 Henry Berliner, a long time friend, invited Fred to become chief engineer of his company, the Engineering and Research Corporation (ERCO) of Washington, DC. Henry was the son of the then famous Emil Berliner, who had invented the microphone portion of the telephone, the flat disc phonograph record (previously records had been tube shaped) and was one of the founders of the company that would ultimately become RCA. In the 1920s the elder Berliner turned his attention to aviation and designed and built one of the first workable helicopters . . . assisted by his son, Henry. During that period, Fred Weick was called upon by the Berliners to help design propeller blades, and he and Henry became lifelong friends. At that time ERCO was manufacturing a variety of metal working machines for the aviation industry, including an automatic punching and riveting machine, but Henry wanted to get into the lightplane manufacturing business. Designing those airplanes was the job he was offering Fred . . . and he got a swift answer in the affirmative. Fred's experiences with the W-1 had made him realize that designing and developing lightplanes was what he enjoyed most, and it was just such a stall/spin proof design Berliner wanted to put on the market.

Henry wanted an airplane with the safety features of the W-1, but not the high wing, pusher configuration. He was an experienced pilot and had owned several aircraft, so he had some pretty definite ideas about the needs and desires of the private pilot. In developing the W-1 a few years earlier, Fred had proceeded on the assumption that the ideal personal airplane was one that could safely land and take off from almost any open piece of ground, but Berliner disagreed. He told Fred that most private owners preferred landing at improved airports where fuel and services were available and would be willing to give up a little short field capabil-

ity for added cruise speed. After thinking it over, Fred agreed and would say in his biography, **From The Ground Up**, that he had been glad ever since that he did. Berliner also thought there would be sales resistance to a pusher configuration because pilots would fear the rear mounted engine would crush them in the event of a crash, so he insisted on a tractor instead. Fred agreed on the condition that if it proved impossible to make the 2-control system and other W-1 features work on a tractor, he could revert to a pusher design.

With Berliner's parameters in mind, Fred set about designing what would become the Ercoupe during the winter of 1936-37. He says today that the configuration was "more or less obvious to me from the start." With the engine up front, the thrust line needed to be as high as possible over the wing in order to approximate the aerodynamic geometry achieved in the W-1 . . . so from the very beginning, the airplane was a low wing tractor with a tricycle gear. Fred wanted an engine of 60 or 65 hp but the only suitable American engine available at the time was the Continental A-40 which was rated at just 37 hp. Hoping that something more powerful would come along before the new airplane's development was completed, an A-40 was purchased for use in the prototype.

Quite familiar with the NACA airfoils being tested at the time, Fred chose the 43013 and after running a number of calculations, determined that a span of 30 feet would be the best compromise for the airplane he had in mind. Fred was assisted in this work by a new ERCO engineer, Bob Sanders. Bob had been a fellow researcher at NACA Langley when Fred was there in the early 1930s and had been a member of the W-1 design team, so he was familiar with the technology Fred intended to employ in the new ERCO design. Bob's other distinction was that he was Henry Berliner's nephew.

The construction of the ERCO prototype, which was given the name Model 310, began in the spring of 1937. Its all-metal structure (but with fabric covered wings) had been designed to make maximum use of ERCO metal working machines, so the work progressed rapidly. Completed in late September, the Model 310 was flown for the first time . . . by Bob Sanders . . . on October 1, 1937. Looking at pictures, the airplane is fully recognizable to our eyes today as an Ercoupe, but with some notable differences. The wing, fuselage and landing gear look familiar when we view old photographs of the Model 310, but the nose contained the little A-40 with its cylinders exposed like those on a Cub. There was no rear cabin window, initially, but one was soon added . . . and likewise a single vertical tail soon gave way to the twin tail arrangement all of us associate with the Ercoupe. The airplane had been built with provision to test it as both a 2-axes and 3-axes control airplane, but the first flights were made with the 3-control system in place. The single vertical tail worked well enough in the 3-control control testing, but was not adequate when the rudder and ailerons were connected for 2-control operation. The fix was the twin tail arrangement . . . plus a 5 degree downward cant of the engine.

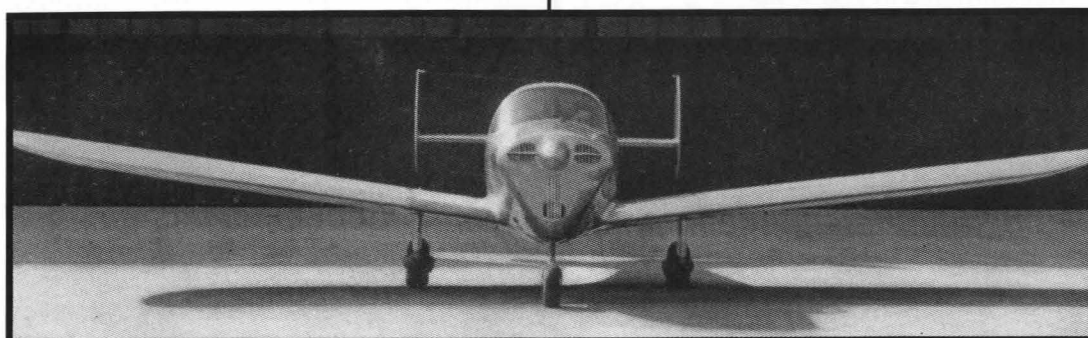
With these changes, the Model 310 flew as intended, both as a 2-control and a 3-control airplane, so the decision was made to



move on to a production prototype. Unfortunately, in the spring of 1938 there still was no suitable engine in the 60-65 hp range, so ultimately at the suggestion of famed engine designer, Harold Morehouse, ERCO decided to build its own engine. Morehouse was hired away from Continental . . . which was dragging its feet in putting his latest design into production . . . and Harold promptly laid out a 4-cylinder, inverted, inline, air-cooled engine for ERCO, and made arrangements for all the parts to be made at shops in the Detroit area. Fred had requested the inverted, inline engine because the slim cowl it would require would provide good forward visibility for the pilot, as well as the high thrust line that was crucial to the geometry of the design. In just a little over six months Harold had an engine running, and after a 50 hour full-throttle durability test, it was installed in the prototype in place of the A-40. Somehow at that point the airplane acquired the nickname "Jeep" after the little creature in the Popeye comic strip.

That fall of 1938, ERCO moved into a new and larger plant in nearby Riverdale, Maryland, with its own runways beside the building. The production prototype was completed there late in 1939 and was certified by the CAA in January of 1940 with the inline ERCO engine. By that time, however, Continental had finally decided to produce Harold Morehouse's new design . . . which was the marvelous flat four that ultimately evolved into the immortal A-65 and progressed through the -75,-80,-85,-90 series and is still in production today as the air cooled O-200 and the watercooled Voyager version of the engine. ERCO could buy the A-65 for \$425, which was about half what it was costing them to sub out and assemble their inline four, so they immediately switched to the Continental. That made it necessary to redesign the cowl . . . and when that was done, the Ercoupe as we know it today was essentially completed. The name, incidentally, was a brainstorm of ERCO's advertising firm. Two seated, closed cars of that era were called coupes, so ERCO and coupe were run together to create a new word: "Ercoupe."

The Ercoupe's type certificate (ATC 718) was issued on March 25, 1940 and mandated that a placard be placed on the instrument panel stating that the airplane was "characteristically incapable of spinning." Surprisingly, this applied when the Ercoupe was being flown either as a 2- or 3-control plane. The CAA also required that when the



This early production model of the Ercoupe was flown by *The Sportsman Pilot's* James B. Taylor, Jr. and written up in the May 1940 issue of the magazine. It was powered by a 65 hp Continental A-65 and had no starter or electrical system.

airplanes were flown with the 2-control system, the rudder pedals had to be removed to avoid confusion by pilots. The early Ercoupes, Model 415-Cs, had hand brakes only so there was no problem such as there would have been had the airplane had toe brakes.

After certification, work began immediately on a batch of 10 airplanes. The first 4 of them were purchased by the CAA to use in an experiment to determine how the agency was going to deal with licensing those persons who chose to get their initial flight training in an Ercoupe. In the experiment, two groups of people were taught to fly . . . one in Ercoupes and one in Piper J-3s. The students, both men and women, came from all walks of life and ranged in age from 18 to 46 years. Eight hours was the average time students took to solo Cubs, and in the early '40s the CAA required a minimum of 35 combined hours of dual and solo to qualify for a Private pilot's license. The Ercoupe pilots in the experiment took an average of 4 hours and 18 minutes to solo, and one managed the feat in only 2 hours and 15 minutes. Several of the Ercoupe pilots continued the training until their instructors felt they were ready for a Private license, and averaged just 21 hours and 55 minutes getting to that stage. As a result of this experiment, the CAA created a special licensing category for Ercoupe pilots in which the required time for a Private license was reduced from 35 to 25 hours. (The requirement actually was for any 2-control airplane with a tricycle gear and anti-spin characteristics, but was popularly known as the "Ercoupe license.")

Almost immediately, the Ercoupe began getting rave reviews in both the aviation and general press, being hailed as the harbinger

of a new age of personal travel. Non-pilot reporters were given rides and allowed to "drive" the airplane, and most came back convinced that the foolproof airplane had finally been invented. Their articles, which were often wildly unrealistic, helped produce a flood of orders for Ercoupes and very quickly a new run of 100 airplanes was started down ERCO's production line. The price in 1940 was \$2,590 with one set of controls and \$2,665 with dual controls. All were without starters or electrical systems, although wind-driven generators and low freq radios were options. The Ercoupe had wide appeal both in and out of aviation . . . for reasons perhaps not so obvious to us today. In 1940 . . . in that age of tube and rag, high wing lightplanes, the Ercoupe was a radically advanced looking airplane. Its low wing, tricycle gear, twin tails and all-metal construction was to 1940 eyes the combining of features of some of the hottest new fighter planes of the day: the low wing and tricycle gear of the P-39, the twin tails of the P-38, the unpainted "silver bullet" look of all the latest military jobs . . . and yet with its advanced new 2-control system, it was safer than its tube and fabric contemporaries. This was the age of progress . . . the New York World's Fair had been devoted entirely to "the world of tomorrow" . . . and the Ercoupe seemed the very personification of "the future here today."

The great tragedy of the Ercoupe was the onset of World War II. Early in 1941, the government cut off the supply of materials like aircraft aluminum to all but the plants preparing for the war everyone knew was coming . . . and ERCO, with some 900 orders in hand and more coming in every day, had to shut down the Ercoupe production line "for

the duration." 110 Ercoupes had been built before the aluminum supply dried up, and two more were assembled from parts on hand, for a total of 112 pre-war production airplanes.

With the bombing of Pearl Harbor still nearly a year away, ERCO decided to build an all-wood version of the Ercoupe. Two of them were completed before the war started, but that program was also cancelled when all lightplane production for the civil market was halted. Fred Weick recalls that the wooden Ercoupes were quieter than the metal versions, but weighed an additional 50 pounds.

The Jeep, the prototype of the Ercoupe line, was given to Fred Weick and three of his fellow ERCO employees. They enjoyed flying it for several years . . . until one night it was destroyed in a windstorm.

During World War II, ERCO stepped up production of its machine tools and became a subcontractor for Boeing and Convair, designing and developing gun turrets for bombers and flying boats. The firm also made propeller blades for Stinson L-5s. ERCO facilities had to be enlarged quite a bit to handle all its wartime business . . . which put it in good shape for the huge post war production of Ercoupes everyone was anticipating. Early in 1945, the military contracts began to wind down, so ERCO's tool design department was put to work designing a completely new tooling and production system for the Ercoupe . . . a system capable of cranking out 10 airplanes in an 8 hour shift.

Fred and his engineering department were also busy . . . making improvements in the Ercoupe they intended to produce after the war. The horsepower was increased to 75 by use of the Continental C-75-12, a full electrical system was standard, as were two wing tanks and a fuselage header tank to up the fuel capacity to 23 gallons. Finally, as a result of a CAA rule change for non-aerobatic aircraft, it was possible to increase the plane's gross weight to 1,400 pounds without changes to the airframe. The changes were approved by the CAA as amendments to the pre-war type certificate #718, so the 1946 Ercoupes were still designated as Model 415-Cs. Out of the 900 orders received before the war, only 6 had requested the 3-axes control system, so the decision was made to drop that option on the post-war models . . . a decision Fred would come to believe was a crucial mistake.

When the Japanese surrendered in August of 1945, ERCO was primed and ready to go back into production and the first Ercoupes came rolling out the factory door in October. The order book was full, so production was increased to the factory's 10 airplanes per day capacity by January. Within a few months, the backlog was growing so great that a second shift was put to work, upping production to 20 Ercoupes per day. Shortly afterwards, a third shift was added to boost that to 30 a day . . . and there were a few weeks when 35 a day were being completed!

With the money rolling in and the airplanes flying out, the resources and the incentive were there to begin planning and working for the future of the company. A number of new projects were initiated: ski and float installations, a retractable geared, 140 mph version to be called the Supercoupe, a super quiet

Ercoupe with a special muffler and 4-blade prop, a 4-place version . . . and a 4-place light twin called the Ercoach that had pusher engines buried in the wings instead of in conventional nacelles. Before any of these developments could be completed, however, the great lightplane boom of 1946 suddenly became a bust. One week in September, the ferry pilots simply stopped coming to Riverdale . . . and in very short order over 300 Ercoupes were sitting forlornly on the grounds around the factory. Henry Berliner had no choice but to lay off the third shift . . . then the second . . . and, finally, even the regular day shift had to be cut to the bone. The same thing was happening at most of the other lightplane manufacturing companies, although it took a few months longer for some to reach the saturation point.

With the 20/20 vision hindsight affords us today, we know that the debacle that occurred in the U. S. lightplane industry in late 1946 and early '47 was simply a matter of the pipeline suddenly filling to overflowing. Over 31,000 lightplanes were produced in 1946 alone, and that turned out to be a lot more than there were customers to buy them. Most were sold to distributors who, in turn, sold them to FBOs for use principally as trainers and for rental. The excess that had been ordered for sale to individuals simply was not purchased in any significant number. It had been predicted that great numbers of those servicemen coming home from the war with their pockets full of overseas pay would buy airplanes . . . but they bought cars, made down payments on homes and went to college instead. Lightplane production in '47 was half that of the preceding year and '48 production was half of what it was in '47 . . . and by 1949 most of the companies in business in 1946 were in or near bankruptcy. So many 2-place lightplanes were built in '46, '47 and '48 that the demand for them never really recovered. It would be a full decade before Cessna started making the 150 and Piper the Colt in significant numbers, but those were mainly for flight schools that wanted new airplanes to entice students. Pilots are still flying the 2-place lightplanes built in the late '40s and will as long as they can be rebuilt to airworthy condition.

In the summer of 1947 Henry Berliner sold the entire Ercoupe business, lock, stock and barrel, to his nephews, Bob and Dick Sanders. Over the next five years, about 200 additional Ercoupes were assembled from the huge parts inventory that had been on hand to support production of 35 airplanes a day. Sanders Aviation made a number of changes to the design during this period, including the familiar bubble windshield, a shoulder harness option and a kiddie seat for the baggage compartment. With the changes came new Model designations: the 415 D, E, F, G and H. The E Model included a split elevator and the Continental C-85-12 engine, as well additional up elevator travel, to 20 degrees. The F Model was a fuel injected C-85-12J version of the E, but was never marketed. The G was a deluxe version with the kiddie seat and the H was a stripped down economy model without an electrical system. By 1952 Ercoupe sales had pretty well fizzled out and in 1954 the business was sold to Vest Aircraft, now Univair, and moved to Ft. Collins, CO. 5,140 Ercoupes had been built at Riverdale, Maryland.

Fred Weick was long gone from Maryland when the sale to Univair took place. After learning in 1947 that Berliner was going to sell the Ercoupe rights and assets, he accepted a professorship at Texas A&M College in College Station, Texas where he would direct the development of what is considered to be the prototype of the modern ag plane. This celebrated work, which went to great extremes to provide a safe cockpit, has been credited with saving the lives of countless pilots over the years since Fred's Ag-1 made its first demonstration flight on December 1, 1950. In 1957 Fred would become the director and chief engineer of Piper Aircraft's new Development Center in Vero Beach, FL. He led the design of all the subsequent Piper aircraft until his retirement in 1969. The Pawnee and the prodigious Cherokee series are the Piper aircraft for which he is best known.

In April of 1955 the Ercoupe rights and assets were purchased from Vest Aircraft by Forney Industries of Denver. Forney put the Ercoupe back into production in facilities in Ft. Collins, CO. . . . after making substantial changes in the design: upgrading to the Continental C-90-12F engine, replacing the fabric on the wings with metal, switching from rubber donuts in the landing gear shock system to springs . . . and a number of other largely cosmetic and creature comfort items. Recertified as the Forney F-1 Aircoupe, three levels of trim and equipment were offered . . . with the names Explorer, Expediter and Execta. Later, the Forney F-1A Trainer was developed, with the gross weight increased to 1,450 pounds. Between 1955 and 1960, Forney produced 157 F-1 Aircoupes at Ft. Collins.

In August of 1960 a very complex deal came together . . . in which the city of Carlsbad, New Mexico purchased the Ercoupe/Aircoupe rights and assets from Forney. Carlsbad was a depressed area at the time and was trying to bring in any kind of industry that would create jobs. A seven million dollar bond issue had been floated to bring the Ercoupe/Aircoupe to the area, but as events would transpire, the only one who likely profited from the deal was the broker who sold the bonds. The city leased the business to the newly formed AirCoupe Division of the Air Products Company of Long Beach, CA, and the first of just 25 Carlsbad Coupes came off the production line on December 16, 1960. Air Products spent a lot of time and resources over the next two years attempting to develop a retractable geared 'Coupe, contracting with Tom Herbert of Fullerton, CA, the founder of Met-Co-Aire, to make the modification. Herbert had already developed a number of Ercoupe mods, the best known of which was a kit to metallize the ERCO-built fabric covered wings, and in this program he came up with leaf spring steel main gear legs that trailed backward and a re-engineered wing. The retractable geared prototype was completed and flown (it would do 140), but was wiped out in a landing accident. Air Products defaulted on its contract with the city of Carlsbad in December of 1961 and the operation was finally shut down in February of 1962.

The Ercoupe/Aircoupe enterprise sat dormant until March 16, 1964 when the rights and assets were purchased by two Beech executives, John Allen and Lee Higdon. The two had tried to get Beech to buy the design

while it was owned by Forney, but were not successful. When Air Products closed shop, they decided to do the deed themselves. They formed a new company called Alon, a contraction of their names, sold stock and started the Carlsbad production line briefly. After building just one airplane, however, they closed down, loaded everything on trucks and moved to a new plant on the McPherson, Kansas airport. A series of still more modifications were made to the by now venerable design, requiring the issuance of still another ATC. Alon installed a different version of the 90 hp Continental, the C-90-16F, replaced the old canopy arrangement with a sliding bubble and 4 inch lower side rails, and installed a modern instrument panel and cockpit interior. Designated as the Alon Model A-2, the new/old airplane was marketed as a 3-control airplane with rudder pedals, but a 2-control option could be bought on special order. A trailing leaf spring main gear like the one developed by Tom Herbert became a standard feature a few years later.

Alon also worked on new models of the airplane, intending to produce a Model A-3 with a 130 hp Franklin engine, and a 4-place, 150 hp version. Unfortunately, however, after producing 245 A-2s, they, too, ran out of money and had to close the doors in September of 1967.

Just a few weeks later, on October 9, the Ercoupe/Aircoupe/AirCoupe/Alon type certificates, marketing rights, tooling and parts were purchased by Mooney Aircraft. Production was resumed at McPherson, with the airplane redesignated the A-2A. After 21 were built, a modified version called the Cadet, with a new canopy and a square rear window, was introduced. 38 were built before the McPherson plant was shut down and everything was carted off to Kerrville, Texas late in 1968. There at the Mooney plant, a still more radically modified version of Fred Weick's old design was developed. Intended to be a trainer for Mooney dealers, the design had been purchased simply because it was cheaper to modify an existing airplane than design and certify a new one from scratch. Therefore, since Mooneys were conventional 3-control airplanes and the trainer had to be suitable for preparing students to fly them, the old 'Coupe was now altered into something completely removed from what it had originally been. The old twin tail was removed and replaced by a characteristically Mooney straight leading edge single tail, and, heresy of all heresies, had stall strips installed on the wing to make the airplane stall and spin! Named the Mooney M-10, there were still some elements of Fred Weick's original design left in the basic structure . . . but the M-10 was no longer an Ercoupe.

59 M-10s would be built in Kerrville, but by this time Mooney, itself, was in dire financial straits . . . and was in the process of going through a couple of additional corporate hands: American Electronic Laboratories and Butler Aviation. The M-10 production line was shut down in 1970 and, as it turned out, that, at long last, would be the end of the string for the Ercoupe as a production airplane. It was not the absolute end, however, because in 1974 Univair stepped back into the picture again and repurchased the Ercoupe and all its subsequent permutations . . . and has been supplying parts ever

the ERCOUPE

begins a new Era in Private Flying

- A NEW ORDER OF EASE AND SIMPLICITY OF FLIGHT IS ACHIEVED BY REDUCING CONTROL PROBLEMS TO A MINIMUM
- ERCOUPE'S INDIVIDUAL CHARACTERISTICS INVITE CROSS-COUNTRY FLYING AND GIVE CONFIDENCE AND PEACE OF MIND
- UTILITY IS FURTHER INCREASED BY A CRUISING SPEED OF OVER 100 M.P.H. AND THE ABILITY TO USE ANY SMALL FIELD

● OTHER ERCOUPE FEATURES INCLUDE:

Excellent all-round field of view, both in the air and on the ground, through transparent convertible coupe top.

Can be changed in an instant from an open to a closed airplane.

Elimination of spin hazard. (Certified SPINPROOF by the Civil Aeronautics Board.)

Tricycle landing gear and hydraulic brakes which make for easy landings, short runs, and eliminate danger of ground-looping or nose-overs.

Steerable nose wheel for positive ground maneuvering.

Ability to operate under high wind conditions.

Economy of maintenance and durability from all-metal construction.

● These are features that make The ERCOUPE an essentially useful airplane for your personal transportation. We will gladly give you full particulars.

Two-place—65 h.p. Continental Engine—\$2590 f.a.f.

PERFORMANCE WITH SAFETY **ERCOUPE** ENGINEERING AND RESEARCH CORPORATION
RIVERDALE, MARYLAND • CABLE "ERCO" WASHINGTON, D.C.



This ad, which appeared in the August 1940 issue of *The Sportsman Pilot*, is apparently the very first Ercoupe advertisement. It was also the last one in that magazine before World War II. With first year production set at 100-125 airplanes and with 900 orders on hand, there was no need to do any more advertising.

since.

The Ercoupe has, of course, become a Classic showplane today, and roughly half those ever produced are still active. Sifting through the FAA's incredibly bad registration records, I managed to come up with the following aircraft still carried on the agency's books:

ERCO 415C	1,806
415CD	160
415D	186
415E	92
415G	54
Forney F-1	79
F-1A	33
Alon A-2	186
A-2A	33
Mooney A-2A	6
M-10	51
Total	2686

In the late 1960s, Skip Carden of Durham, NC founded the Ercoupe Owner's Club and began printing a newsletter, **Coupe Capers**. This led to national and regional Ercoupe fly-ins . . . and like all such efforts created an *esprit de corps* that was both good for the souls of Ercoupe owners and good for the aircraft themselves because owners started really lavishing money and effort on them. Today, you see them on the line at Oshkosh, Sun 'n Fun and elsewhere vying for trophies with the best of them. Perhaps the most heart warming aspect of the coming together of the Ercoupe faithful is the fact that the group has made Fred Weick its patron saint. He and his late wife, Dorothy (see Kaleidoscope), have been regulars at Ercoupe functions for years and are genuinely loved by all. With his literally mind-boggling aeronautical credentials, Fred is due the most profound respect of all . . . but that's only part of the man. With all he has accomplished in his 90 plus years, with all the honors and awards he has so deservedly won, he has remained one of the most admirable human

beings ever put on this earth. Modest to a fault, caring and considerate of others, he is a national treasure.

I wish I could say that Fred has nothing but good memories and feelings toward his Ercoupe, but unfortunately that is not the case. He is proud of the design from the standpoint of technological achievement, as well he should be, but he has some regrets over what others did to the airplane. Because he set out in the beginning to design a safer airplane, an easier to fly airplane that could be enjoyed by a greater percentage of the population, it was perhaps inevitable that he would suffer some disappointment along the way. Right from the beginning, others began touting the Ercoupe as a foolproof airplane . . . but Fred never intended or said it was a foolproof airplane. Right from the beginning, he insisted that while inherently quite safe, the airplane was different enough from Cubs, Aeroncas and the like, that care needed to be taken by instructors to properly train people to fly it. Unfortunately, there would be those who worked to attract students and buyers by claiming that only two or three hours of training were necessary before one could solo and be on his or her way to a glorious flying career . . . and as a result, too many inadequately trained pilots were turned loose in Ercoupes in the 1940s. Inevitably, they began having the kind of accidents inexperience and poor training cause . . . undershooting and overshooting landings, hitting obstructions on takeoff out of fields too short for the airplane, groundlooping in crosswinds far in excess of the airplane's (or any other's) crosswind component, etc., etc.

Another factor that besmirched the reputation of the Ercoupe immediately after World War II was the macho syndrome. Discharged military pilots were attracted to the Ercoupe because of its sleek lines, but felt it was beneath their dignity to get a check-out before going off solo. A lot of them ended up crunching 'Coupes, which, of course, led less experienced pilots to think, "Boy, if ol' Bob the war ace can't handle that thing, it's certainly not for me!"

Perhaps the lowest blow was the fact that instructor's who were using some other type of airplane for training, warned everyone

who came to the airport not to learn to fly in an Ercoupe " . . . because you can't fly anything else if you do." There was truth in this, of course, because it was necessary for an Ercoupe pilot to get some dual before it would be safe to solo a 3-control taildragger. What they didn't say was that it was only prudent to get a checkout when switching to any new type of airplane.

The result of all this was an accident record that seemed to ironically belie the safety aspects of the Ercoupe design . . . and a kind of second class citizenship for Ercoupe pilots. Instead of becoming the mainstream of weekend personal flying as Fred had hoped, the Ercoupe became a sort of black sheep at most airports for many years, with its pilots sneered at as something less a hero than those macho guys who wrestled those ornery taildraggers to the ground every day. "Hey, Bill, goin' out for a Sunday drive?" was a common putdown Ercoupe pilots endured during the 1950s and much of the 60s.

Not everyone was cowed by these taunts, however. Right from the beginning in 1940, there were many, many pilots who became fervent adherents of the Ercoupe. Usually, they were persons who were properly taught to fly in the airplane and flew it as it should have been flown. I recall one of them from my own student pilot days in 1956. There was one Ercoupe on the little airport where I was learning to fly in a Cub, and its owner was ridden unmercifully about his Sunday driving, his need for a training wheel, etc., etc. . . . but this fellow fought back. His greatest pleasure in flying was to come to the airport on a day too windy for the taildraggers to be flying and burst into the FBO's lounge where the rest of us were holed up to exclaim in a loud voice: "Hey, why isn't anyone flying on a beautiful day like this!" He would then proceed to roar off in his Ercoupe and spend the next hour shooting crosswind landings on the runway that was just outside the big picture window all of us were pretending not to look through. Sometimes you could see the son of a gun laughing as he came floating by in that ridiculous crab that somehow never seemed to matter at touchdown.

Two things have served to change attitudes toward the Ercoupe over the years. One is the fact that after Cessna switched

over to the tricycle gear in 1956 on most of its airplanes . . . to join Piper, Beech and the majority of other manufacturers . . . it wasn't too long before the "nose dragger" became the true "conventional" landing gear. Once a full generation of pilots learned to fly in tricycle geared airplanes, many of which have connections between the rudder and elevator, there was less and less of a tendency to look on the Ercoupe as something "different." The second factor is the sport aviation movement that has grown to such importance in the past two decades. Now, all old airplanes are held in high esteem, and enthusiasts go to great extremes delving into the histories of the various types. Any design that has some unusual technical feature or operational history . . . for example, the fact that the Ercoupe was the testbed for rocket assisted take-off, or RATO, as it was called during World War II . . . or that one was once launched off a wire like a control line model . . . make the airplane that much more desirable. The fact that the Ercoupe was designed by the great Fred Weick . . . and came about as a result of pioneering aeronautical research at NACA . . . and was once displayed and sold in downtown New York department stores . . . well, it's just simply **prestigious** to own an airplane with that kind of pedigree.

My final thought concerning the Ercoupe is one I've expressed before on these pages: What might have been . . . had World War II never occurred? What would personal flying be like today if all the pre-war plans of people like Fred Weick had not been thwarted . . . if production could have been run up normally in a time when the public was still enamored with flying? Perhaps eventually personal flying would have grown to the point where economies of scale would have made it economically feasible for vastly greater numbers of people to fly and own airplanes . . . so that today there would be enough of us to dictate FAA policy, rather than always having to react to it after the fact.

Perhaps.

In any case, I'm glad we still have beautiful examples of Ercoupes and all the others of days gone by to remind us of the hopes and dreams once held for the future that has become our today. It gives us the courage to



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keep trying to realize them.

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From The Ground Up, Fred Weick and James R. Hansen, Smithsonian Institution Press, Washington and London, 1988.

This is Fred Weick's autobiography and was reviewed here in **Sportsman Pilot** in our Summer 1988 issue (Page 5), Volume 8, Number 2. A must not only for Fred Weick and Ercoupe/Cherokee fans, but for any serious student of aviation history. Fred has been so much a part of aviation for the past 70 years that his efforts cannot be overlooked.

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A recent issue, this is the only complete history of the Ercoupe. Recommended.

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All of us who write about civil aviation owe a never ending debt of gratitude to Joe Juptner. The 9 volumes of "Juptner" are indispensable.

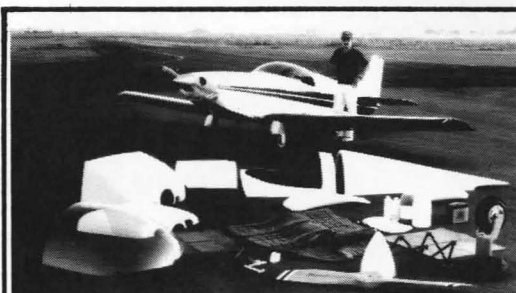
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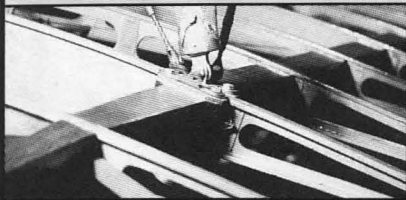
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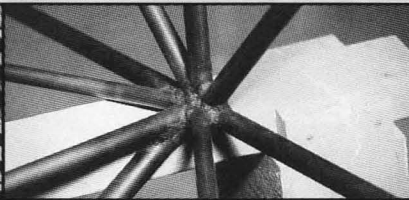
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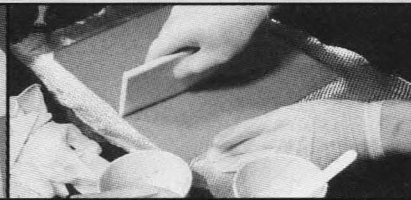
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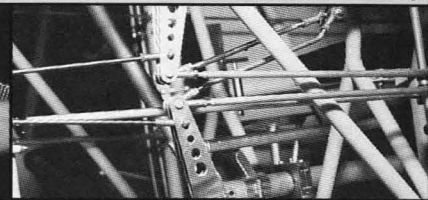
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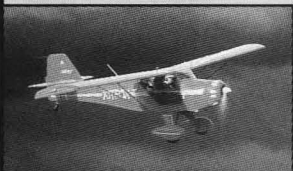
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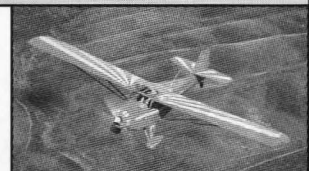
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